# Model Examinations of the School Book

## Model 1

**Answer the following questions :**

**1 Complete each of the following :**

( 1 ) 1.5 litre + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

( 2 ) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

( 3 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

( 4 ) The area of the triangle = $\frac{1}{2}$ × ..... × .....

( 5 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = .....

( 6 ) The opposite table shows the marks of 40 students in one test , then the number of students who got less than 30 marks = .....

| Marks | 10 – | 20 – | 30 – 40 |
|---|---|---|---|
| Number of students | 10 | 13 | 17 |

**2 Choose the correct answer :**

( 1 ) The range of the set of values : 7 , 3 , 6 , 9 and 5 is .....

( 2 or 4 or 6 or 12 )

( 2 ) $\frac{3}{4}$ = ..... (in decimal form) ( 0.2 or 0.5 or 0.25 or 0.75 )

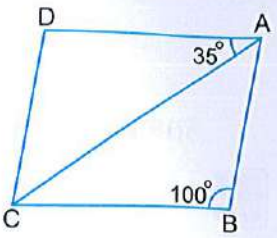
( 3 ) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is ..... hours.

( 4 or 6 or 7 or 8 )

**( 4 ) In the opposite figure :**

ABCD is a parallelogram. , then

m (∠ ACD) = .....




( 35° **or** 45° **or** 100° **or** 180° )

**( 5 )** If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = ..... ( 2 **or** 5 **or** 6 **or** 15 )

**( 6 )** The following data are descriptive data except .....

( favorite colour. **or** age. **or** birth place. **or** blood species. )

**3** **[a]** A container has 12 litres of oil , it is wanted to put them in smaller bottles the capacity of each of them is 400 $cm^3$. Calculate the number of bottles which are needed.

**[b]** If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

**4** **[a]** The ratio among the measures of the angles of a triangle is 2 : 3 : 4 Find the measure of each angle in this triangle.

**[b]** A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

**5** **[a]** Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year , the net profit was L.E. 3 900 Calculate the share of each of them from the profit.

**[b] The following table shows the marks of 100 students in one month in math test :**

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve of this distribution.

# Model 2

**Answer the following questions :**

## 1 Choose the correct answer :

( 1 ) If one angle of a parallelogram is right , then it is called a .....

( rectangle. **or** square. **or** rhombus. **or** cube. )

( 2 ) $\frac{24}{5}$ = .....

( $4\frac{1}{5}$ **or** $3\frac{2}{5}$ **or** $4\frac{4}{5}$ **or** $2\frac{4}{5}$ )

( 3 ) If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 , then the range of these marks = .....

( 32 **or** 33 **or** 28 **or** 86 )

( 4 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = .....

( 16 **or** 18 **or** 20 **or** 22 )

( 5 ) $1\frac{3}{4}$ = ..... %

( 25 **or** 50 **or** 75 **or** 175 )

( 6 ) $\frac{513}{614}$ ..... $\frac{432}{145}$

( > **or** < **or** = **or** ≥ )

## 2 Complete the following statements :

( 1 ) The data : the age , the tall , the weight and favorite food are quantitative data except .....

( 2 ) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of the box = ..... $cm^3$

( 3 ) The following table shows the marks of 50 students in one month in math :

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 15 | 20 | 10 | 50 |

then the number of students whose marks are less than 40 is ..... students.

( 4 ) If the height of the fence of the villa in the design is 5 cm. and its real height is 6 metres , then the drawing scale is ..... : .....

(5) $\frac{3}{4} + 5\frac{1}{2} = 7 -$ .....

(6) A car consumes 20 litres of petrol to cover a distance 250 km.

, then the rate of consumption of the car = .....

**3** **[a]** Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds.

Calculate the share of each of them.

**[b]** 10 litres of water were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the water in the vessel.

**4** **[a]** In one of our schools , there are 360 students , if the ratio between the number of boys and the number of girls is 1 : 2

Find each of the number of boys and girls.

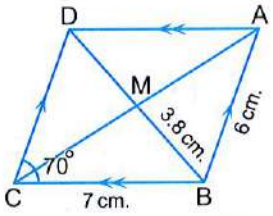
**[b]** **In the opposite figure :**

ABCD is a parallelogram in which AB = 6 cm.

, BC = 7 cm. , BM = 3.8 cm. , m (∠ C) = 70°

Without using geometrical instruments.

Find : m (∠ ADC) , the perimeter of Δ BCD




**5** **[a]** Heba bought a mobile phone for 660 pounds with a discount 15 %

Calculate the price of the mobile phone before the discount.

**[b]** **The following table shows the number of hours which are spent by 40 pupils to study their lesson daily :**

| **Number of hours** | 1 – | 2 – | 3 – | 4 – | 5 – 6 | **Total** |
|---|---|---|---|---|---|---|
| **Number of pupils** | 6 | 3 | 8 | 12 | 11 | **40** |

Represent these data by the frequency curve.

## Model examination for the special needs students

**Answer the following questions :**

### 1 Complete the following statements :

( 1 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

( 2 ) $\frac{3}{10}$ = ..... %

( 3 ) The volume of a cuboid = the area of base × .....

( 4 ) 3 litres = ..... $cm^3$

### 2 Choose the correct answer :

( 1 ) The range of the values 50 , 25 , 35 and 20 is .....

( 10 *or* 20 *or* 30 )

( 2 ) If $\frac{2}{3} = \frac{10}{x}$ , then $x$ = .....

( 6 *or* 15 *or* 20 )

( 3 ) The diagonals are perpendicular in .....

( rectangle *or* square *or* parallelogram )

( 4 ) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is .....

( 1 : 10 *or* 1 : 1 000 *or* 1 : 100 )

### 3 Choose from column (A) to the suitable one from column (B) :

| A | B |
|---|---|
| (1) The cube has ..... edges. | minimization |
| (2) If the drawing scale < 1 , this expresses ..... | 12 |
| (3) The ratio between the side length of the square and its perimeter = ..... | 90° |
| (4) All of angles of the rectangle are equal in measure and the measure of any of them = ..... | 1 : 4 |

**4** **Put true (✔) or false (✘) :**

( 1 ) The numbers 1 , 2 , 6 and 12 are proportional. ( )

( 2 ) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is 20 % ( )

( 3 ) The favorite colour is a descriptive data. ( )

( 4 ) The volume of a cube of edge length 3 cm. = 9 $cm^2$ ( )

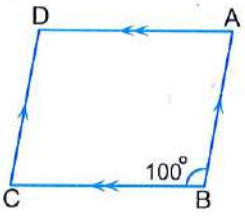
**5** **[a] Complete each of the following :**

( 1 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

( 2 ) **In the opposite figure :**

ABCD is a parallelogram , then

m (∠ D) = .....°




**[b] The following table shows the marks of 50 students in one month in maths :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 6 | 10 | 20 | 14 | 50 |

**Complete :**

( 1 ) The number of students whose marks are less than 20 = ..... students.

( 2 ) The number of students whose marks are 40 or more = ..... students.

# 2022 Schools' Examinations from Different Governorates

## 1 Cairo Governorate

El-Zeiton Educational Directorate
Talaea Gaber El-Ansary Language School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) If $\frac{x}{3}$ = 9 % , then $x$ = ..... ( 2.7 or 7.2 or 27 or 0.27 )

( 2 ) The highest common factor for 12 and 15 is .....

( 3 or 6 or 24 or 60 )

( 3 ) If the drawing length is 7 cm. and the real length is 28 m. , then drawing scale = ..... ( 1 : 400 or 1 : 40 or 400 : 1 or 1 : 4 )

( 4 ) If 4 , $x$ , 12 , 18 are in proportion , then $x$ = .....

( 2 or 3 or 6 or 54 )

( 5 ) The following data are quantitative except the .....

( age or tallness or weight or favorite colour )

( 6 ) The ratio between the side length of an equilateral triangle and its perimeter = ..... ( 1 : 2 or 1 : 3 or 1 : 4 or 3 : 1 )

( 7 ) If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called .....

( rhombus or square or triangle or rectangle )

**2 Complete :**

( 1 ) The ratio between 18 kirats and 1 $\frac{1}{2}$ feddan = ..... : .....

( 2 ) 30 % from 50 = .....

( 3 ) If a : b = 2 : 3 , $\frac{b}{c} = \frac{4}{5}$ , then a : b : c = ..... : ..... : .....

( 4 ) 1 – (39 % + 0.21) = .....

( 5 ) The 4 sides are equal in length in each of ..... , .....

( 6 ) A cuboid which its base is a square of side length 4 cm. , if the volume of cuboid is 64 $cm^3$ , then its height = ..... cm.

( 7 ) The range of the set of the values : 7 , 3 , 6 , 9 and 5 is .....

( 8 ) If a car covered 180 km. in 3 hours , then the speed of this car = ..... km./hour.

## 3 Choose the correct :

( 1 ) $0.35 + \frac{9}{20}$ = ..... % ( 0.8 **or** 70 **or** 80 **or** 55 )

( 2 ) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measure of the smallest angle is .....

( 10° **or** 30° **or** 45° **or** 60° )

( 3 ) The circumference of circle : The length of its radius = .....

( $2\pi : 1$ **or** $1 : 2\pi$ **or** $\pi : r$ **or** $1 : \pi$ )

( 4 ) In a primary school , if the ratio between the number of boys to the number of pupils of the school is 3 : 7 , then the ratio between the number of boys to the number of girls is ..... ( 3 : 4 **or** 4 : 3 **or** 3 : 7 **or** 2 : 5 )

( 5 ) The cubic centimeter is a unit of measuring .....

( the perimeter **or** the area **or** the volume **or** the length )

( 6 ) A metallic cube of edge length 40 cm. , it is melted and converted to a cuboid whose base area = 2 000 $cm^2$ , then its height = .....

( 16 cm. **or** 32 cm. **or** 64 cm. **or** 80 cm. )

( 7 ) The volume of a cuboid whose dimensions are 20 cm. , 30 cm. and 50 cm. = ..... litres. ( 100 **or** 300 **or** 30 **or** 3000 )

## 4 Answer the following :

( 1 ) If the perimeter of one face of a cube is 24 cm. Find its volume.

.....

.....

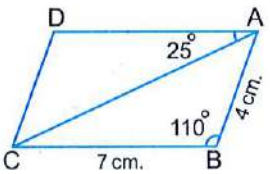
( 2 ) If the cost price of a fridge before a discount of 12 % is L.E. 1 350
What is its price after discount ?

.....

.....

( 3 ) **In the opposite figure :**

ABCD is a parallelogram in which AB = 4 cm.
, BC = 7 cm. , (∠ B) = 110° , m (∠ DAC) = 25°




**Find :** **[a]** m (∠ ACD)

**[b]** the perimeter of the parallelogram.

.....

.....

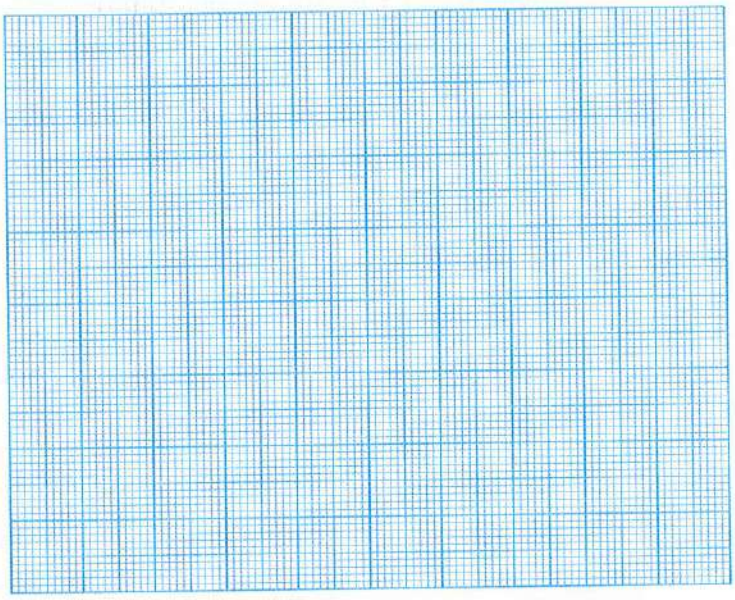
**( 4 ) The following table shows the marks of 100 students in a maths exam :**

| Marks | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|
| No. of students | 15 | 40 | 30 | 15 | 100 |

[a] What is the number of students who record less than 40 marks ?

.....

[b] Draw the frequency curve for this distribution.



## 2 Cairo Governorate

Al-Khalifa and Al-Mokattam Educational Zone
Good a Shepherd Arabic-Language School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) In the parallelogram , the sum of measures of each two consecutive angles = .....° ( 160 or 19 or 180 or 100 )

( 2 ) The ratio between the side length of a square and its perimeter is ..... ( 1 : 3 or 3 : 1 or 4 : 1 or 1 : 4 )

( 3 ) 20 % of 3 000 = ..... ( 6 000 or 60 or 600 or 300 )

( 4 ) If A : B = 2 : 7 , B : C = 7 : 5 , then A : C = ..... ( 2 : 7 or 2 : 5 or 5 : 7 or 2 : 10 )

( 5 ) The range of the marks 9 , 8 , 12 , 13 , 15 is ..... ( 8 or 9 or 7 or 6 )

( 6 ) The volume of a cube where its edge length is 15 cm. is ..... $cm^2$ ( 225 or 3 375 or 375 or 45 )

( 7 ) The ratio between 20 hours to one day is ..... : .....

( 5 : 6 **or** 6 : 5 **or** 3 : 5 **or** 20 : 1 )

## 2 Complete :

( 1 ) ..... is a parallelogram one of its angles is right.

( 2 ) If Mira drinks 21 glasses of milk weekly , then the rate of her drinking in one day is ..... glasses/day

( 3 ) A cuboid its volume 400 $cm^3$ , its base area = 50 $cm^2$ , then its height = ..... cm.

( 4 ) ..... is a ratio between two quantities of different measurements units.

( 5 ) The two diagonals are equal in length and perpendicular in .....

( 6 ) 12 kirats : 1.5 feddan = ..... : ..... (in the simplest form).

( 7 ) If the volume of a cube = 27 $cm^3$ , then the edge length = ..... cm.

( 8 ) 1 – (35 % + 0.2) = .....

## 3 Choose the correct answer :

( 1 ) $\frac{4}{5}$ = .....

( 30 % **or** 60 % **or** 50 % **or** 80 % )

( 2 ) 3.2 litres = ..... $dm^3$

( 3.2 **or** 320 **or** 3200 **or** 32000 )

( 3 ) If the real length is 4 m. and the drawing length is 4 cm. , then the drawing scale = .....

( 1 : 100 **or** 100 : 1 **or** 200 : 3 **or** 3 : 200 )

( 4 ) The following data are quantitative except .....

( age **or** number of sons **or** weight **or** blood species )

( 5 ) If 4 , $x$ , 12 , 18 are proportional , then $x$ = .....

( 3 **or** 4 **or** 6 **or** 12 )

( 6 ) 2 kg. : 5 000 gm. = .....

( 1 : 2 **or** 2 : 5 **or** 1 : 10 **or** 1 : 5 )

( 7 ) The two diagonals are equal and not perpendicular in .....

( square **or** rectangle **or** rhombus **or** parallelogram )

## 4 Answer the following questions :

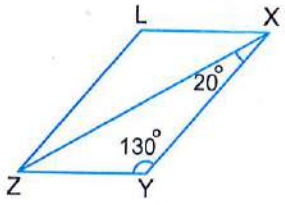
( 1 ) **In the opposite figure :**

**Find :** m (∠ L) , m (∠ LXZ)

.....

.....

.....



( 2 ) If the ratio between the measures of the angles of a triangle is 1 : 2 : 3 , then find the measure of each angle of the triangle.

.....

.....

.....

( 3 ) A man put L.E. 3 000 in a bank with an interest 10 % Calculate the sum of the money after a year.

.....

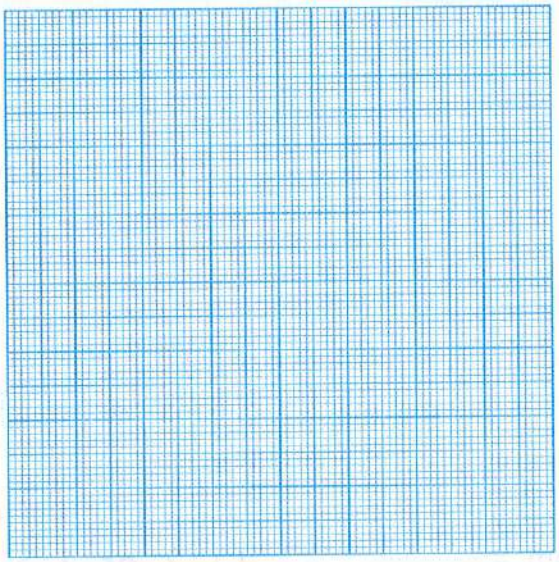
.....

.....

**( 4 ) The following table shows the extra money which workers got in a month in a factory :**

| The extra money | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – | Total |
|---|---|---|---|---|---|---|---|
| Number of workers | 20 | 15 | 30 | 20 | 10 | 5 | 100 |

Draw the frequency curve for this data.



## 3 Giza Governorate

El-Dokki Educational Zone
Modern Narmer Language School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) A vessel in the shape of a cube with edge length 12 cm. , then its capacity = ..... litres.

( 1.728 *or* 1728 *or* 17.28 *or* 1728 )

( 2 ) 3 m. : 60 cm. = .....

( 1 : 5 *or* 1 : 2 *or* 5 : 1 *or* 1 : 20 )

(3) 1 – 33 % = ..... ( 32 % or 67 % or 77 % or 6.7 )

(4) The descriptive data from the following is .....
( perimeter or favourite colour or area or length )

(5) 3 , ..... , 6 , 8 are proportional. ( 7 or 8 or 2 or 4 )

(6) If the real length is 9 m. and the drawing length is 9 cm. , then the drawing scale is ..... ( 1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 9 )

(7) Adam spends L.E. 40 within 5 days , then the rate of what Adam spends = ..... L.E./day ( 200 or 45 or 35 or 8 )

## 2 Complete :

(8) $\frac{7}{50}$ = ..... %

(9) 1.6 litres + 400 $cm^3$ = ..... $dm^3$

(10) The solid which all of its faces is in the shape of a rectangle is called .....

(11) The diagonals of the ..... bisect each other and perpendicular but not equal in length.

(12) 15 : 105 = 1 : .....

(13) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ = ..... : ..... : 3

(14) The range of the set of values 8 , 3 , 7 , 10 and 9 is .....

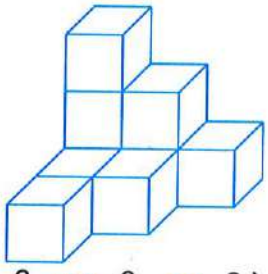
(15) The cuboid of base area 35 $cm^2$ and height 8 cm. is of volume = ..... $cm^3$

## 3 Choose the correct answer :

(16) If ABCD is a parallelogram in which m (∠ C) = 80° , then m (∠ D) = .....
( 100° or 90° or 180° or 80° )

(17) If one angle in a parallelogram is right , then it is called .....
( equilateral triangle or rhombus or square or rectangle )

(18) The number of cubes in the opposite figure is .....



( 5 or 6 or 8 or 9 )

(19) The range = the greatest value ..... the smallest value.
( + or ÷ or – or × )

(20) If $\frac{2}{5} = \frac{6}{x}$ , then $x$ = ..... ( 6 or 8 or 12 or 15 )

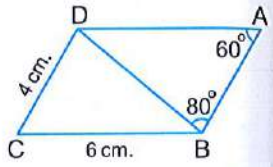
(21) 35.5 % = ..... ( 0.355 or 35.5 or 305.5 or $35\frac{1}{5}$ )

(22) $4\frac{1}{8}$ = ..... ( $\frac{4}{8}$ or $8\frac{1}{4}$ or 4.125 or 41.25 )

## 4 Answer the following :

**(23) In the opposite figure :**

ABCD is parallelogram , m (∠ A) = 60° , m (∠ ABD) = 80°
, BC = 6 cm. and CD = 4 cm. , then find :




[a] m (∠ C) = .....°

[b] m (∠ CBD) = .....°

[c] Perimeter of ABCD = ..... cm.

**(24)** A man bought a mobile phone for 4400 pounds with discount 15 %
Calculate the price of the mobile phone before the discount.

.....

.....

.....

**(25)** The number of pupils of grades four , five and six in a primary school is 720 pupils. If the ratio between the number of pupils in the $4^{th}$ to the $5^{th}$ to the $6^{th}$ is 9 : 8 : 7 Calculate the number of pupils in each grade.

.....

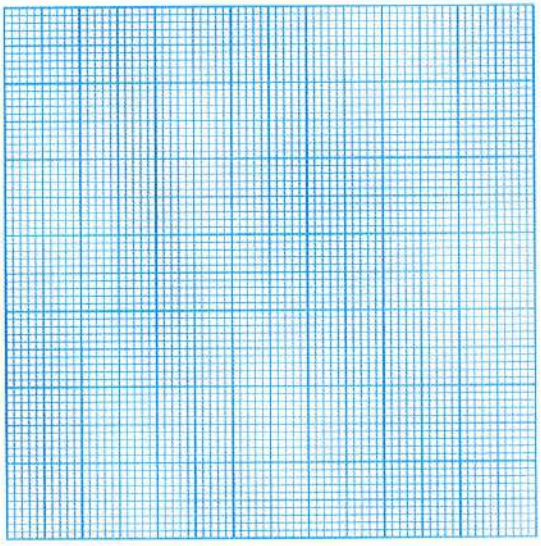
.....

.....

**(26) The following table shows the number of hours which spent by 30 pupils to study their lessons daily :**

| No. of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| No. of pupils | 2 | 6 | 10 | 8 | 4 | 30 |

Represent these data using the frequency curve.



## 4 Giza Governorate

Sixth October Educational zone
Faislia Islamic Language School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) 5 000 gm. : 8 kg. = ..... ( 5 : 80 **or** 8 : 5 **or** 80 : 5 **or** 5 : 8 )

( 2 ) The following data are descriptive except .....

( favorite color **or** age **or** birth place **or** blood species )

( 3 ) A parallelogram is called a rectangle if the measure of one of its angles = .....° ( 80 **or** 90 **or** 81 **or** 180 )

( 4 ) The range of the values 7 , 2 , 9 , 1 , 3 is .....

( 5 **or** 8 **or** 6 **or** 4 )

( 5 ) ABCD is a square , the ratio between AB : CD = .....

( 1 : 1 **or** 1 : 2 **or** 1 : 3 **or** 2 : 1 )

( 6 ) Litre is a measuring unit of .....

( capacity **or** perimeter **or** area **or** length )

( 7 ) The volume of a cuboid is 81 $cm^3$ and the area of its base is 27 $cm^2$ , then its height = ..... cm. ( 24 **or** 3 **or** 2 **or** 4 )

( 8 ) The ratio between ages of Noha and Amal = 2 : 15 , if Noha's age is 6 years , then the age of Amal = ..... years.

( 45 **or** 30 **or** 39 **or** 53 )

( 9 ) 46 $dm^3$ = ..... litres. ( 46000 **or** 0.064 **or** 46 **or** 6400000 )

(10) 2.5 : 5.75 = ..... : .....

( 10 : 13 **or** 23 : 10 **or** 2 : 11 **or** 10 : 23 )

(11) A cube of edge length 2 cm. , then its volume = ..... $cm^3$

( 4 **or** 8 **or** 12 **or** 46 )

(12) If 9 , 21 , 3 , $x$ are proportional , then $x$ = .....

( 3 **or** 9 **or** 7 **or** 27 )

(13) 0.35 = ..... % ( 0.35 **or** 35 **or** 27 **or** 0.15 )

(14) A car covers 350 km. in 5 hr. , then rate of the car speed = ..... km./hr.

( 355 **or** 70 **or** 345 **or** 750 )

**2 Complete :**

( 1 ) If a : b = 2 : 3 , b : c = 3 : 5 , then a : c = ..... : .....

( 2 ) If the real length of a tree is 6 m. and its drawing length is 3 cm. , then the drawing scale = ..... : .....

( 3 ) If the percentage of boys in the class is 40 % , then the percentage of girls in the class = ..... %

( 4 ) ABCD is a parallelogram , then : m (∠ B) + m (∠ C) = .....°

( 5 ) If the ratio between the measures of the angles is 2 : 3 : 4 , then measure of the greatest angle = .....°

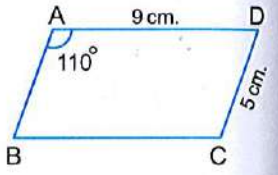
( 6 ) The original price for a shirt is 65 pounds with a discount 20 % , then the paid value (price after discount) = ..... pounds.

( 7 ) The lower limit of a set = 10 and the upper limit = 30 , then its centre = .....

( 8 ) All angles are right and the two diagonals are perpendicular in .....

## 3 Answer the following :

**( 1 ) In the opposite figure :**




ABCD is a parallelogram , m (∠ A) = 110° ,

AD = 9 cm. , DC = 5 cm.

**Find :** [a] m (∠ C)

[b] The perimeter of ▱ ABCD

.....

.....

.....

( 2 ) A cube shaped vessel , its internal edge length is 30 cm. is filled with oil.

[a] Calculate the capacity of the vessel in litres.

[b] If the price of one litre of oil is 9.5 pounds , calculate the price of all oil.

.....

.....

.....

.....

( 3 ) A company for selling the electric sets shows a TV set for L.E. 2 100 , if the percentage of profit is 12 % Find the buying price of the TV.

.....

.....

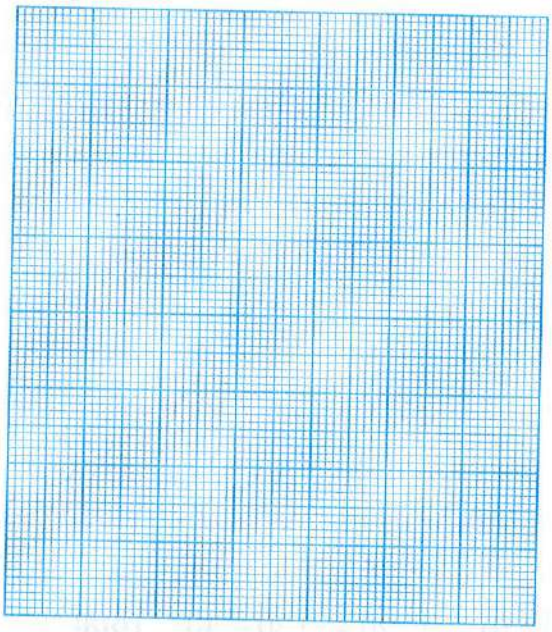
.....

.....

**( 4 ) The following table shows the marks of 30 pupils :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of pupils | 5 | 7 | 10 | 8 | 30 |

Draw the frequency curve of this data.



## 5 Alexandria Governorate

El-Montaza Educational Zone
Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The first term in the ratio $\frac{2}{5}$ is .....

( 7 **or** 5 **or** 2 **or** 10 )

( 2 ) If the percentage of the number of girls in a class which is mixed is 67 % , then the percentage of the number of boys in this class = ..... %

( 33 **or** 25 **or** 43 **or** 32 )

( 3 ) The following data are quantitative except .....

( weight **or** age **or** birth place **or** height )

( 4 ) $\frac{1}{2}$ kg. : 700 gm. = ..... : ..... (in the simplest form)

( 50 : 7 **or** 5 : 70 **or** 7 : 5 **or** 5 : 7 )

( 5 ) The two diagonals are perpendicular in .....

( rectangle **or** rhombus **or** cuboid **or** parallelogram )

( 6 ) If a car covered 180 kilometres within 3 hours , then the speed of this car = ..... km./hour

( 40 **or** 60 **or** 70 **or** 80 )

(7) The volume of a cuboid whose dimensions are 12 cm. , 10 cm. and 8 cm. ..... the volume of a cube of edge length 10 cm.

( > or = or < or ≥ )

## 2 Complete the following :

(1) If $\frac{5}{8} = \frac{15}{x}$ , then $x$ = .....

(2) The sum of the measures of any two consecutive angles in a parallelogram = .....°

(3) If a : b = 1 : 3 , b : c = 3 : 7 , then a : c = ..... : .....

(4) If the drawing length is 5 cm. and the real length is 5 m. , then the drawing scale is .....

(5) 0.12 = ..... %

(6) The volume of the cuboid = ..... × .....

(7) Description of the pattern □ △ ○ □ △ ○ is repetition for .....

(8) The following table shows the marks of 40 students in one test , then the number of student who got less than 30 = ..... students.

| Marks | 10 – | 20 – | 30 – 40 | Total |
|---|---|---|---|---|
| Frequency | 10 | 13 | 17 | 40 |

## 3 Choose the correct answer :

(1) A container has 12 litres of oil , it is wanted to put in small bottles the capacity of each of them is 400 $cm^3$ , then the number of bottles which needed = ..... ( 0.03 or 30 or 300 or 800 )

(2) If the drawing scale ..... 1 , it expresses magnification.

( < or = or > or ≤ )

(3) $\frac{1}{8} : \frac{1}{2} : \frac{1}{4}$ = ..... ( 2 : 1 : 4 or 1 : 4 : 2 or 4 : 2 : 1 or 8 : 2 : 4 )

(4) The range of the numbers 7 , 4 , 6 , 9 and 5 is .....

( 4 or 6 or 5 or 12 )

(5) The ratio between the perimeter of a square and its side length = .....

( 4 : 1 or 1 : 3 or 1 : 4 or 3 : 1 )

(6) The number of faces of a cube ..... The number of faces of a cuboid.

( > or = or < or ≠ )

(7) 2.1 $m^3$ = ..... litres. ( 0.021 or 0.0021 or 210 or 2100 )

## 4 Answer the following :

( 1 ) Ahmed bought a car for L.E. 60 000 and sold it with profit 5 % , find the selling price of the car.

.....

.....

.....

( 2 ) A primary school has 540 pupils. If the ratio between the number of boys and number of girls is 4 : 5 Calculate the number of each boys and girls.

.....

.....

.....

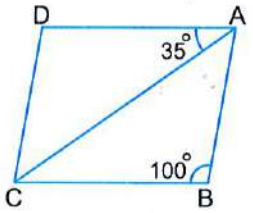
( 3 ) **In the opposite figure :**

ABCD is parallelogram , m (∠ DAC) = 35°

and m (∠ ABC) = 100°

**Find :** [a] m (∠ D)

[b] m (∠ ACD)

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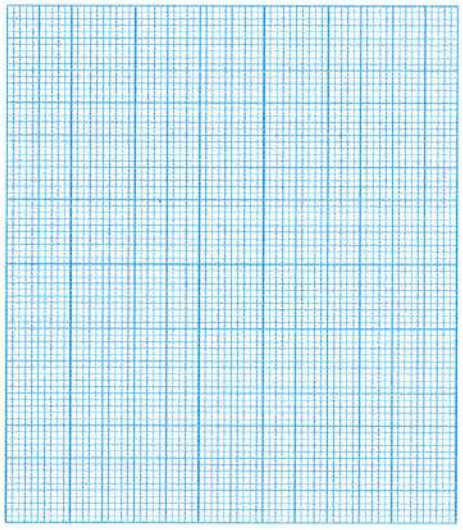
( 4 ) **The following table shows the marks of 80 students in one month in maths test :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 10 | 20 | 35 | 15 | 80 |

Represent these data by frequency curve.



## 6 El-Kalyoubia Governorate — Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

(1) 30 : 90 = ..... ( 0.3 **or** 1 : 6 **or** 4 : 12 **or** 4 : 8 )

(2) The range of the values : 10 , 3 , 7 , 13 , 4 and 11 is .....

( 8 **or** 7 **or** 11 **or** 10 )

(3) 25 % of 8 = ..... ( 2 **or** 20 **or** 200 **or** 32 )

(4) A primary school the ratio between the number of boys to the number of girls is 3 : 4 , if the number of girls is 56 , then the number of boys = .....

( 21 **or** 42 **or** 32 **or** 24 )

(5) 2 kirats : 2 feddans = ..... ( 1 : 1 **or** 1 : 2 **or** 1 : 12 **or** 1 : 24 )

(6) If a : b : c are three numbers such that a : b = 3 : 4 and b : c = 4 : 9 , then a : c = ..... ( 9 : 32 **or** 4 : 9 **or** 1 : 3 **or** 1 : 4 )

(7) A cube made of thick glass its external edge is 32 cm. and the thickness of glass is 1 cm. , then the capacity of the cube = ..... litres.

( 29791 **or** 39.304 **or** 29.791 **or** 27 )

(8) If the range in frequency distribution is 40 and the length of the set = 5 , then the number of sets = ..... ( 8 **or** 195 **or** 7 **or** 10 )

(9) $\frac{1}{2}$ kg. : 2 000 gm. = ..... ( 1 : 40 **or** 1 : 2 **or** 1 : 4 **or** 1 : 20 )

(10) The volume of a cube its base perimeter 8 cm. is ..... $cm^3$

( 8 **or** 512 **or** 16 **or** 60 )

(11) A car covered 250 km. within 5 hours , then the speed of the car = ..... km./hr. ( 50 **or** 200 **or** 2.5 **or** 0.02 )

(12) All sides are equal in length in each of the following figures except .....

( square **or** rhombus **or** equilateral triangle **or** trapezium )

(13) The volume of cuboid of dimensions 3 cm. , 4 cm. , 5 cm. = ..... $cm^3$

( 36 **or** 33 **or** 60 **or** 12 )

(14) $\frac{1}{2} : \frac{1}{5} : \frac{1}{10}$ = ..... ( 2 : 5 : 10 **or** 10 : 5 : 2 **or** 5 : 2 : 1 **or** 1 : 2 : 5 )

**2 Complete the following :**

(1) If $\frac{4}{6} = \frac{6}{x}$ , then $x$ = .....

(2) Hani bought 3 kg. of orange , he paid L.E. 15 , then the cost of 7 kg. = L.E. .....

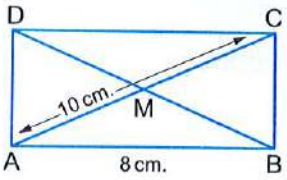
( 3 ) If the length of an insect in the picture is 20 cm. and its real length is 5 mm. , then the drawing scale = ..... : .....

( 4 ) **In the opposite figure :**

ABCD is a rectangle where AB = 8 cm.

and AC = 10 cm.

, then the perimeter of AMB = ..... cm.




( 5 ) The two diagonals of the rhombus bisect each other and .....

( 6 ) If L.E. 300 distributed among three persons in the ratio 1 : 2 : 3 , then the difference between first and third = L.E. .....

( 7 ) 12.3 $cm^3$ = ..... $mm^3$

( 8 ) The kind of the data of age , length , weight and date of birth is ..... data.

## 3 Answer the following :

( 1 ) The ratio between two adjacent angles in a parallelogram is 4 : 5 , find the measure of each angle.

.....

.....

.....

( 2 ) A company for selling the electric sets , it shows TV by discount L.E. 500 , if the percentage of the discount is 10 % of the original price. Find the price after discount.

.....

.....

.....

( 3 ) A vessel in the shape of a cube with edge length 20 cm. , is filled with honey.

[a] Calculate the capacity of the vessel in litre.

[b] If the cost of honey is L.E. 96 Calculate the price of a litre.

.....

.....

.....

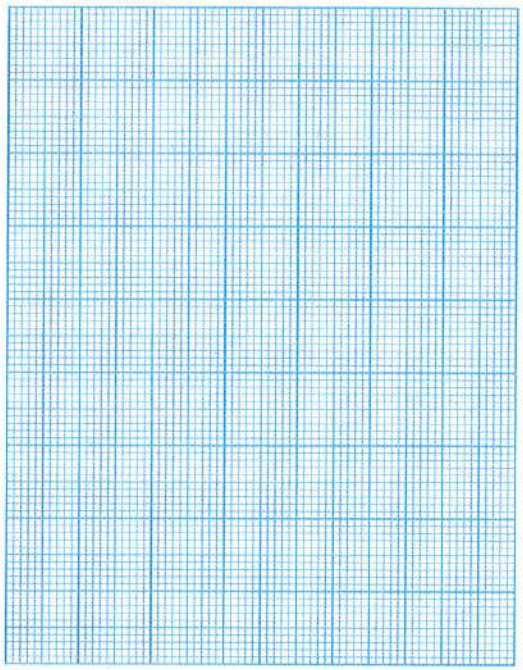
( 4 ) **The following table shows the number of hours which 30 students of a school spend to study their lessons :**

| Sets | 1 – | 2 – | 3 – | 4 – | 5 – |
|---|---|---|---|---|---|
| Frequency | 3 | 5 | 7 | 9 | 6 |

[a] Draw the frequency curve of the distribution.

[b] Find the percentage of the greatest number of pupils in studying their lessons.

.....



## 7 El-Sharkia Governorate

Diarb Negm Educational Zone
El-Sweedy Gov. Lang. School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) $\frac{1}{3} : \frac{1}{4}$ = ..... : ..... ( 3 : 4 *or* 1 : 1 *or* 4 : 3 *or* 3 : 7 )

( 2 ) If the drawing scale is < 1 , then its expresses .....

( enlargement *or* congruency *or* minimization *or* otherwise )

( 3 ) 5 600 $cm^3$ = ..... litres. ( 56 *or* 5.6 *or* 0.56 *or* 560 )

( 4 ) The ratio between any two sides of equilateral triangle is .....

( 1 : 3 *or* 3 : 1 *or* 2 : 3 *or* 1 : 1 )

( 5 ) If the perimeter of one face of a cube is 8 cm.
, then its volume = ..... $cm^3$ ( 12 *or* 27 *or* 64 *or* 8 )

( 6 ) If the volume of a cuboid is 560 $cm^3$ , its base length is 8 cm. and its width is 5 cm. , then its height = ..... cm.

( 14 *or* 50 *or* 80 *or* 20 )

( 7 ) $\frac{9}{20}$ = ..... % ( 35 *or* 45 *or* 30 *or* 40 )

**2 Complete :**

( 8 ) If 3 , 4 , $x$ and 20 are propertion , then $x + 2$ = .....

( 9 ) If the sum of lengths of all edges of a cube is 36 cm.
, then its volume = ..... $cm^3$

**(10)** If a : b = 2 : 3 and b : c = 6 : 5 , then a : c = ..... : .....

**(11)** The rhombus whose one of its angles is right , then it is called .....

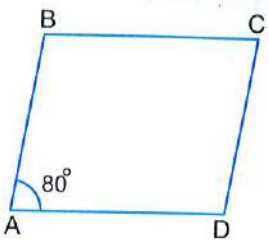
**(12)** If the market price of TV is 2000 pounds , it has been sold for 1800 pounds after discount , then the percentage of discount = .....%

**(13)** 1 , 5 , 9 , 13 , ..... (in the same pattern)

**(14) In the opposite figure :**

ABCD is a parallelogram where m (∠ A) = 80°

, then m (∠ B) = .....°




**(15)** If we divide the data into the sets

(10 – , 20 – , 30 – , ...)

, then the length of each set = .....

## 3 Choose the correct answer :

**(16)** 12 kirats : $1\frac{1}{2}$ feddans = ..... : .....

( 1 : 3 **or** 2 : 3 **or** 3 : 4 **or** 4 : 5 )

**(17)** If the ratio among the measures of angles of triangle is 2 : 3 : 4 , then the measures of the smallest angle = .....° ( 40 **or** 60 **or** 80 **or** 180 )

**(18)** The range of marks 40 , 50 , 20 , 80 , 70 is .....

( 20 **or** 40 **or** 80 **or** 60 )

**(19)** If $\frac{x}{18}$ = 10 % , then $x$ = ..... ( $\frac{5}{6}$ **or** $\frac{9}{5}$ **or** $\frac{18}{5}$ **or** $\frac{9}{50}$ )

**(20)** The following data are descriptive except .....

( age **or** birth place **or** favorite colour **or** address )

**(21)** A man drinks 3.5 litres of juice weekly , then the rate of what he drinks daily is ..... litre/day ( 3.5 **or** $\frac{1}{2}$ **or** 2 **or** 3 500 )

**(22)** If one angle of a parallelogram is right , then it is called .....

( rectangle **or** square **or** rhombus **or** cube )

## 4 Answer the following questions :

**(23)** A container has 12 litres of oil , if we want to put the oil in small bottles the capacity of each of them 400 $cm^3$. Calculate the number of bottles which are needed.

.....

.....

.....

**(24)** If the distance between two cities on a map is 7 cm. with a drawing scale 1 : 200 000 Find the real distance between them in km.

.....

.....

.....

**(25)** The ratio between the ages of Hend , Yassien and Fayrouz is 2 : 3 : 5 , if the difference between age of Yassien and age of Faurouz is 4 years. Find the age of each one.

.....

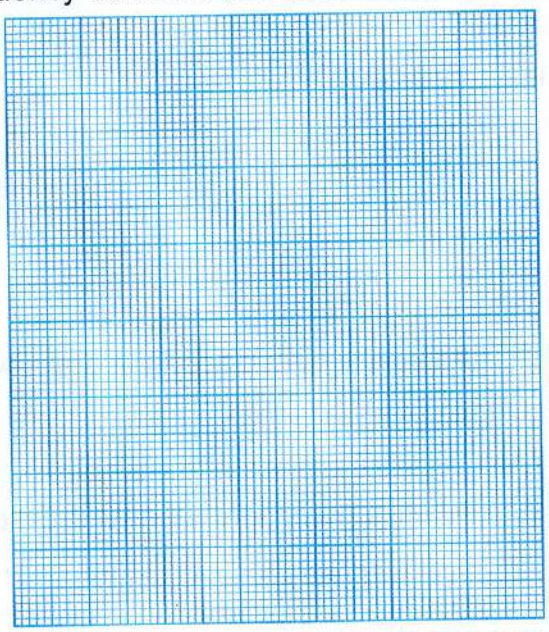
.....

.....

**(26) The following table shows the number of hours spent by 40 pupils to study their lesson daily :**

| **Number of hours** | 1 – | 2 – | 3 – | 4 – | 5 – | **Total** |
|---|---|---|---|---|---|---|
| **Number of pupils** | 6 | 4 | 8 | 12 | 10 | **40** |

Draw the frequency curve for this distribution.



## 8 El-Monofia Governorate

Quesna Educational Directorate
Mathematics Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** If the volume of a cuboid is 64 $cm^3$ and its base area is 16 $cm^2$ , then its height = ..... cm. ( 24 **or** 4 **or** 3 **or** 1 064 )

(2) The ratio between the side length of the square and its perimeter is ..... : ..... (1 : 4 **or** 4 : 1 **or** 1 : 1 **or** 1 : $\pi$)

(3) 16 kirats : 1 feddan = ..... : .....

(3 : 2 **or** 16 : 1 **or** 2 : 3 **or** 4 : 5)

(4) A car covered 180 km. in 3 hours , then the speed of this car = ..... km./hr.

(60 **or** 80 **or** 90 **or** 540)

(5) $\frac{3}{2} : \frac{7}{3}$ = ..... : ..... (3 : 7 **or** 9 : 14 **or** 7 : 3 **or** 3 : 2)

(6) If the ratio among the measures of angles of a triangle is 1 : 2 : 3 , then the measure of the smallest angle = .....° (90 **or** 60 **or** 30 **or** 70)

(7) If A : B = 2 : 3 and A : C = 3 : 5 , then B : C = .....

(3 : 5 **or** 2 : 5 **or** 6 : 9 **or** 9 : 10)

(8) The ratio between 1.2 : 3.6 = ..... : .....

(3 : 1 **or** 1 : 3 **or** 7 : 2 **or** 3 : 4)

(9) If $\frac{x+2}{8} = \frac{3}{4}$ , then $x$ = ..... (4 **or** 6 **or** 8 **or** 10)

(10) The range of values 7 , 3 , 6 , 9 , 5 is ..... (3 **or** 4 **or** 6 **or** 12)

(11) 20 % of ..... = 30 (6 **or** 150 **or** 600 **or** 60)

(12) All the following data are descriptive except .....

(social case **or** birth place **or** age **or** blood species)

(13) How many bottles of 750 mL. , each can be filled with 30 litres of water ? (4 **or** 40 **or** 400 **or** 4 000)

(14) If the drawing length = 3 cm. and the real length = 9 m. , then the drawing scale = ..... (30 : 1 **or** 1 : 30 **or** 300 : 1 **or** 1 : 300)

## 2 Complete the following :

(15) If the drawing scale > 1 , this expresses .....

(16) 1 – (35% + 25%) = ..... %

(17) If the perimeter of one face of a cube is 8 cm. , then its volume is ..... $cm^3$

(18) A cuboid its dimensions are 8 cm. , 6 cm. and 10 cm. , then its volume is ..... $cm^3$

(19) If one of the angles of a paralleogram is right , then it will be .....

(20) 250 gm. : $\frac{1}{2}$ kg. = ..... : .....

(21) 12.5 % = $\frac{.....}{8}$

(22) A tractor ploughs 28 feddans in 4 hours , then the number of hours to ploughs 42 feddans = ..... hours.

**3 Answer the following :**

**(23)** A man bought a car for L.E. 50 000 and sold it for L.E. 55 000 , then find the percentage of his profit.

.....

.....

.....

**(24)** The sum of lengths of all edges of a cube is 108 cm. Calculate its volume.

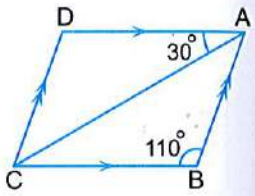
.....

.....

.....

**(25) From the opposite figure :**

Find m (∠ D) and m (∠ CAB)

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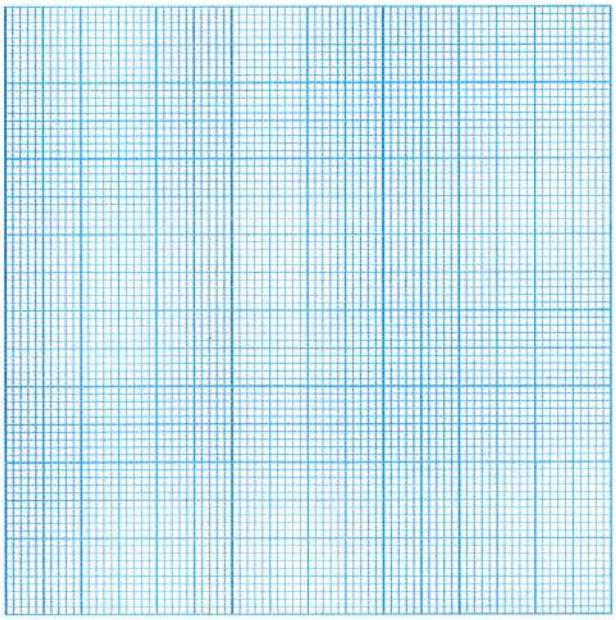
**(26) The following table shows the age of visitors to an exhibition within an hour of the day :**

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

Draw the frequency curve for this distribution.



## 9 El-Gharbia Governorate — Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) 1 – 25 % = ..... % ( 25 or 50 or 65 or 75 )

( 2 ) If the drawing scale is ..... 1 , this expresses minimizition.

( = or > or < or ≥ )

( 3 ) If A : B = 2 : 5 , B : C = 5 : 7 , then A : C = .....

( 5 : 7 or 2 : 5 or 2 : 7 or 6 : 9 )

( 4 ) 1 feddan : 18 kirats = ..... ( 4 : 3 or 5 : 9 or 2 : 7 or 3 : 4 )

( 5 ) The volume of a cuboid of dimensions 7 cm. , 5 cm. and 2 cm. = .....

( 14 $cm^3$ or 70 $cm^3$ or 24 $cm^3$ or 144 $cm^3$ )

( 6 ) ABCD is a parallelogram in which m (∠ A) = 60° , then m (∠ B) = .....°

( 600 or 100 or 120 or 80 )

( 7 ) The following data are descriptive except .....

( age or birth place or favorite colour or name )

**2 Complete the following :**

( 1 ) If the drawing length is 6 cm. , and the real length is 6 m. , then the drawing scale = .....

( 2 ) Mariam bought a dress for 425 pounds with a discount 15 % , then the price of the dress before discount = ..... pounds.

( 3 ) 500 grams : 8 kilograms = ..... (in the simplest form)

( 4 ) 2.4 : 3.6 = ..... : ..... (in the simplest form)

( 5 ) The rhombus whose one of its angles is right is called .....

( 6 ) A cube of volume 8 $cm^3$ , its edge length = ..... cm.

( 7 ) The diagonals are perpendicular and not equal in length in .....

( 8 ) The range of the values (3 , 8 , 2 , 5) is .....

**3 Choose the correct answer :**

( 1 ) The ratio between the perimeter of the equilateral triangle and its side length = ..... : ..... ( 3 : 1 or 4 : 1 or 1 : 3 or 1 : 4 )

( 2 ) Hoda spends 70 pounds in a week , then the rate of what she spends daily = ..... pounds/day ( 15 or 10 or 7 or 7.5 )

( 3 ) If the numbers 6 , 8 , 3 , A are proporational , then the value of A = .....

( 2.5 or 48 or 24 or 4 )

( 4 ) 20 % of 500 = ..... ( 10 or 50 or 100 or 250 )

( 5 ) The number of faces of cube = ..... faces. ( 12 or 6 or 8 or 4 )

( 6 ) 4.8 litres = ..... mL. ( 4.8 or 48 or 480 or 4 800 )

( 7 ) The lower limit of a set = 10 , and the upper limit = 30 , then the centre = ..... ( 20 or 25 or 35 or 40 )

## 4 Answer the following :

( 1 ) The volume of a cuboid is 54 $cm^3$ , its base is a square shaped of side length 3 cm. , calculate its height.

.....

.....

.....

( 2 ) In a school , if the number of students is 560 students , and the ratio between the number of girls and the number of boys = 3 : 5 , find the number of boys and girls.

.....

.....

.....

( 3 ) If the length of Suez Canal on a map of drawing scale 1 : 1 100 000 , is 15 cm. Find its real length.

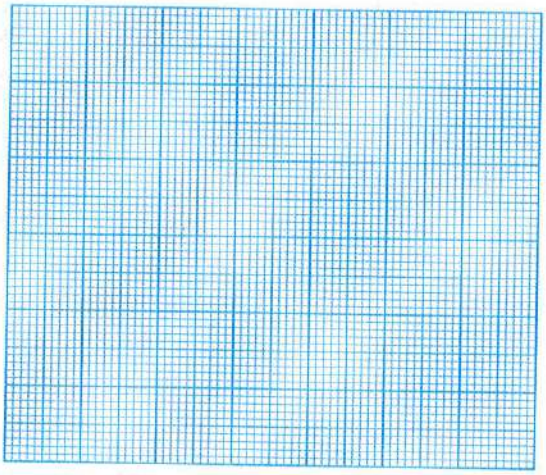
.....

.....

.....

( 4 ) **Using the following table , draw the frequency curve :**

| Sets | 5 – | 10 – | 15 – | 20 – |
|---|---|---|---|---|
| Frequency | 4 | 8 | 10 | 4 |



## 10 El-Dakahlia Governorate — Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) A cube of edge length 3 cm. , its volume = ..... $cm^3$

( 3 **or** 9 **or** 27 **or** 18 )

( 2 ) The ratio between the perimeter of a square and its side length is .....

( 1 : 4 **or** 3 : 1 **or** 4 : 1 **or** 1 : 1 )

( 3 ) The price of an electric iron before discount is 120 L.E. , if the discount is 20 % , then its price after discount = ..... L.E.

( 96 **or** 100 **or** 120 **or** 144 )

( 4 ) 18 hours : one day = ..... ( 4 : 3 **or** 3 : 4 **or** 1 : 3 **or** 3 : 1 )

( 5 ) The following data are quantitative except .....

( age **or** length **or** colour **or** weight )

( 6 ) If one angle of a parallelogram is right , then its called .....

( equilateral **or** rhombus **or** trapezoid **or** rectangle )

( 7 ) $\frac{3}{4}$ = ..... % ( 75 **or** 0.25 **or** 0.75 **or** 0.5 )

**2 Complete the following :**

( 1 ) 7 600 $cm^3$ = ..... litres.

( 2 ) If $\frac{x + 1}{5} = \frac{6}{15}$ , then $x$ = .....

( 3 ) If A : B = 3 : 5 , B : C = 5 : 7 , then A : C = ..... : .....

( 4 ) 500 $cm^3$ + 0.5 $dm^3$ = ..... litre.

( 5 ) If the drawing scale > 1 , this expresses .....

( 6 ) An agricultural tractor ploughs 28 feddans in 4 hours , the time which needed to ploughs 42 feddans is ..... hours.

( 7 ) ABCD is a parallelogram , m ($\angle$ A) = 100° , then m ($\angle$ B) = .....°

( 8 ) The kinds of statistics data are quantitative data and ..... data.

**3 Choose the correct answer :**

( 1 ) The range for the values (3 , 9 , 8 , 2 , 7) is .....

( 8 **or** 9 **or** 2 **or** 7 )

( 2 ) The two diagonals are equal in length in each of square and .....

( rhombus **or** trapezium **or** rectangle **or** isosceles )

( 3 ) If ( $x$ , 18 , 6 , 9) are proportional numbers , then $x$ = .....

( 27 **or** 12 **or** 3 **or** 36 )

( 4 ) An insect of real length 2 mm. and its length in a photo is 4 cm. , then its drawing scale is ..... ( 1 : 20 **or** 20 : 1 **or** 1 : 40 **or** 1 : 80 )

( 5 ) If the ratio between the measures of angles of a triangle is 3 : 6 : 9 , then the type of triangle according to its angles is ..... – angled triangle.

( an acute **or** a right **or** an obtuse **or** an isosceles )

( 6 ) The volume of a cuboid 400 $cm^3$ , its base area is 40 $cm^2$ , then its height = ..... ( 13 cm. **or** 20 cm. **or** 40 cm. **or** 10 cm. )

( 7 ) 300 gm. : 1 $\frac{1}{2}$ kg. = 1 : ..... ( 3 **or** 5 **or** 10 **or** 15 )

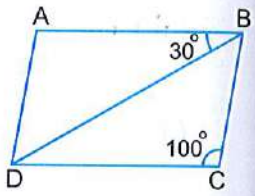
## 4 Answer the following :

**( 1 ) In the opposite figure :**

ABCD is a parallelogram , m (∠ C) = 100°

and m (∠ ABD) = 30° , find :

**[a]** m (∠ A) **[b]** m (∠ ADB)

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( 2 ) If the drawing scale is 1 : 1 000 , the length in the drawing is 0.75 cm. Find the real length in metre.

.....

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( 3 ) Three persons started a business. The first paid L.E. 5 000 , the second paid L.E. 4 000 , and the third paid L.E. 6 000 At the end of the year the profit was L.E. 2 250 , find the share of each one.

.....

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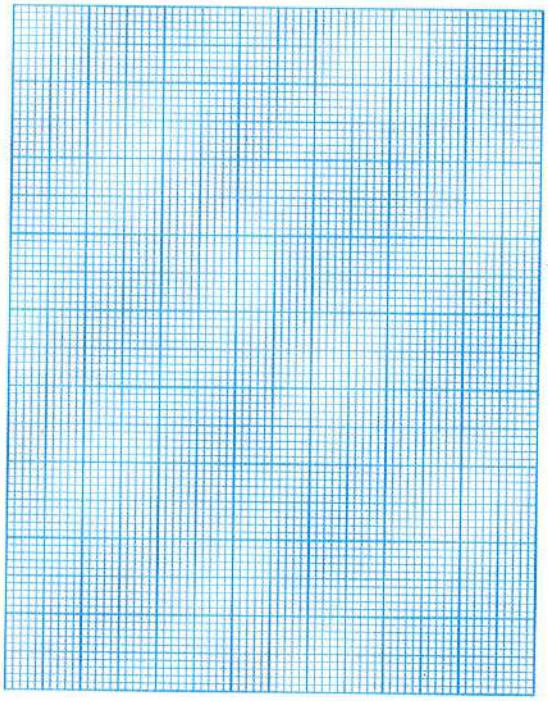
.....

**( 4 ) The table below shows the marks of 40 pupils in a math exam :**

| **Marks** | 10 – | 20 – | 30 – | 40 – | 50 – | **Total** |
|---|---|---|---|---|---|---|
| **Number of pupils** | 4 | 8 | 12 | 10 | 6 | **40** |

Draw the frequency curve for this distribution.



## 11 Ismailia Governorate — Inspectorate of Mathematics

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{3}{5} : 1\frac{4}{5}$ = ..... ( 1 : 2 **or** 1 : 3 **or** 1 : 4 **or** 1 : 8 )

(2) 12 hours : 2 days = ..... ( 1 : 10 **or** 1 : 4 **or** 6 : 1 **or** 4 : 1 )

(3) The opposite data are quantitative except the .....
( tallness **or** weight **or** favorite colour **or** age )

(4) $\frac{1}{4}$ = ..... (in a decimal form) ( 0.2 **or** 0.5 **or** 0.25 **or** 0.4 )

(5) If $\frac{5}{9} = \frac{x}{27}$ , then $x$ = ..... ( 36 **or** 15 **or** 72 **or** 60 )

(6) If a : b = 5 : 6 and b : c = 3 : 4
, then a : c = 5 : ..... ( 7 **or** 8 **or** 6 **or** 9 )

(7) If the dimensions of a cuboid is 3 cm. , 4 cm. , 6 cm.
, then its volume = ..... $cm^3$ ( 40 **or** 60 **or** 52 **or** 72 )

(8) 7 litres = ..... $cm^3$ ( 7 **or** 70 **or** 7 000 **or** 700 )

(9) The range of data 7 , 3 , 6 , 9 and 5 is ..... ( 2 **or** 4 **or** 6 **or** 2 )

(10) If one of the angles of a rhombus is right , then it is called is .....
( square **or** cube **or** parallelogram **or** trapezium )

(11) If the real length is 7 m. and the drawing length is 7 cm.
, then drawing scale = .....
( 1 : 10 **or** 1 : 100 **or** 1 : 1 000 **or** 7 : 100 )

(12) 60 % = ..... ( 600 **or** 6 **or** 0.6 **or** 60 )

(13) The volume of the cube whose edge length = 7 cm. is ..... $cm^3$.
( 14 **or** 343 **or** 49 **or** 28 )

(14) If $\frac{x + 12}{10} = 2$ , then $x$ = ..... ( 6 **or** 4 **or** 8 **or** 16 )

## 2 Complete :

( 1 ) The ratio between side length of a square and its perimeter = .....

( 2 ) 2.5 L + 500 $cm^3$ = ..... L

( 3 ) The volume of a cuboid = 120 $cm^3$ and its base area = 24 $cm^2$
, then its height = ..... cm.

( 4 ) 4.5 : 13.5 = ..... : ..... (in the simplest form)

( 5 ) If the drawing scale < 1 , this expresses .....

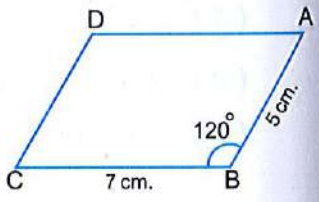
( 6 ) $\frac{3}{4}$ = ..... %

( 7 ) A car covers 180 km. in 3 hours , then the rate of what the car covered is ..... km./hr.

( 8 ) The difference between the greatest value and the smallest value in a set is called .....

## 3 Answer the following :

( 1 ) **In the opposite figure :**
ABCD is a parallelogram
, then find : **[a]** m (∠ D)
**[b]** Perimeter of ABCD

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( 2 ) Samir bought a TV set in the time of sale with a price L.E. 7 600 after discount 5 % Find the price of the TV set before the discount.

.....

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.....

( 3 ) If the ratio between the measures of angles of a triangle is 1 : 2 : 3
, then find the measure of each angle of the triangle.

.....

.....

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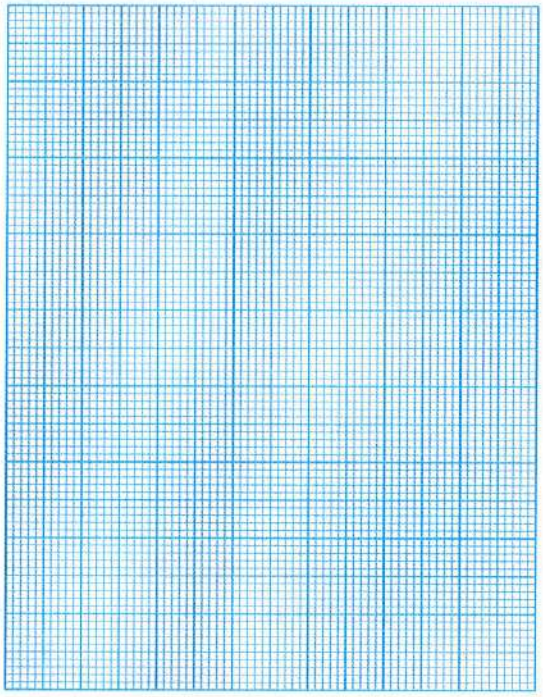
**( 4 ) The following table shows the marks of 100 students in maths exam :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 |
|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 |

Represent these data by a frequency curve.



## 12 Suez Governorate — Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
( 4 *or* 2 *or* 6 *or* 12 )

( 2 ) 1 – 70 % = ..... %
( 30 *or* 32 *or* 50 *or* 20 )

( 3 ) $\frac{5}{2} : \frac{2}{7}$ = .....
( 5 : 7 *or* 35 : 4 *or* 2 : 7 *or* 5 : 2 )

( 4 ) $\frac{3}{4}$ = ..... %
( 25 *or* 50 *or* 57 *or* 75 )

( 5 ) 35 : 50 = ..... (in the simplest form)
( 10 : 7 *or* 7 : 10 *or* 6 : 10 *or* 7 : 9 )

( 6 ) In the parallelogram the sum of the measures of any two consecutive angles = .....
( 45° *or* 90° *or* 180° *or* 360° )

( 7 ) The percentage is a ratio its second term is .....
( 10 *or* 100 *or* 200 *or* 1 000 )

## 2 Complete :

( 1 ) 5 000 gm. : 8 000 gm. = ..... : ..... (in the simplest form)

( 2 ) The statistical data which we use in our daily life are two kinds , descriptive data and ..... data.

( 3 ) The ratio $\frac{5}{13}$ , its first term is ..... and its second term is .....

( 4 ) 40 % + ..... % + 30 % = 100 %

( 5 ) The two diagonals are equal in length in each of ..... , .....

( 6 ) If 6 , 8 , 3 , $x$ are proportional , then $x$ = .....

( 7 ) $\frac{1}{2} : \frac{1}{3}$ = ..... : ..... (in the simplest form)

( 8 ) A cuboid of dimensions 7 cm. , 5 cm. and 2 cm. , its volume = ..... $cm^3$

## 3 Choose the correct answer :

( 1 ) 5 litres = ..... $cm^3$ ( 5 **or** 50 **or** 500 **or** 5 000 )

( 2 ) The ratio between the side length of the square and its perimeter = ..... : ..... ( 1 : 3 **or** 3 : 1 **or** 4 : 1 **or** 1 : 4 )

( 3 ) If one angle of a parallelogram is right , then it is called a .....
( rectangle **or** square **or** rhombus **or** cube )

( 4 ) An iron with price L.E. 120 at 20 % discount , the price after discount = L.E. ..... ( 90 **or** 96 **or** 100 **or** 140 )

( 5 ) If the drawing scale ..... 1 , this expresses minimization.
( > **or** = **or** < **or** ≥ )

( 6 ) The following data are descriptive data except .....
( favorite colour **or** birth place **or** age **or** blood species )

( 7 ) If a car travels 300 km. in 5 hours , then the rate is ..... km./hr.
( 40 **or** 50 **or** 60 **or** 70 )

## 4 Answer the following :

( 1 ) If A : B = 3 : 4 , B : C = 4 : 5 , then find A : C

.....

.....

( 2 ) A picture was taken to an artificial scene with a drawing scale 1 : 100 , if the real length of a tree is 8 meter , find its length in the picture.

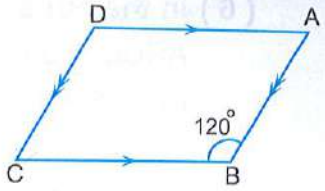
.....

.....

**( 3 ) In the opposite figure :**

ABCD is a parallelogram in which m (∠ ABC) = 120°
Without using geometrical instruments ,
find : m (∠ ADC)

.....




**( 4 ) The following table shows the marks of 36 students in one month in math :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 8 | 10 | 12 | 6 | 36 |

Represent these data by the frequency curve.

## 13 Damietta Governorate — Mathematics Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The ratio between the side length of the square and its perimeter is .....
( 1 : 1 **or** 4 : 1 **or** 1 : 4 **or** 1 : 2 )

( 2 ) 800 : 500 = ..... : ..... (in the simplest form)
( 5 : 8 **or** 8 : 5 **or** 80 : 50 **or** 40 : 25 )

( 3 ) If $\frac{3}{5} = \frac{x}{20}$ , then $x$ = .....
( 3 **or** 4 **or** 5 **or** 12 )

( 4 ) The difference between 40 % and 0.4 = ..... %
( 26 **or** 0 **or** 10 **or** 44 )

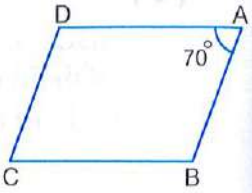
( 5 ) The two diagonals are perpendicular and equal in length in the .....
( rhombus **or** rectangle **or** parallelogram **or** square )

**( 6 ) In the opposite figure :**

ABCD is a parallelogram where

m (∠ A) = 70° , then m (∠ B) = ..... °

( 180 **or** 110 **or** 100 **or** 70 )




**( 7 )** The following data are descriptive except .....

( name **or** birth place **or** age **or** address )

**( 8 )** The comparing between two quantities have the same kind and unit is called ..... ( rate **or** proportion **or** proportional division **or** ratio )

**( 9 )** A piece of land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 $m^2$ , then the share of the first = ..... $m^2$ ( 40 **or** 200 **or** 280 **or** 480 )

**(10)** Nada bought a washing machine at 10 % discount , if the marked price of it is L.E. 8 000 , then the selling price of the washing machine after discount = L.E. ..... ( 8 800 **or** 7 200 **or** 7 000 **or** 8 000 )

**(11)** If Mohamed bought 4 kg. of orange for L.E. 24 , then the amount he should pay to buy 7 kg. = L.E. ..... ( 42 **or** 24 **or** 20 **or** 6 )

**(12)** The volume of a cube whose edge length is 5 cm. = ..... $cm^3$

( 25 **or** 100 **or** 125 **or** 150 )

**(13)** 3 500 $cm^3$ = ..... litres. ( 3.5 **or** 35 **or** 350 **or** 35 000 )

**(14)** The range of the set of the values (7 , 3 , 10 , 9 , 2) is .....

( 2 **or** 6 **or** 7 **or** 8 )

## 2 Complete :

**( 1 )** The equality of two or more ratios is called .....

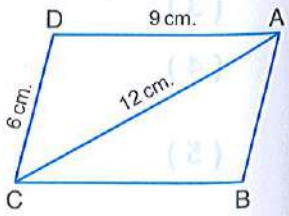
**( 2 )** If A : B = 2 : 3 , B : C = 3 : 5 , then A : B : C = ..... : ..... : .....

**( 3 )** If Omar was studying 28 hour per week , then the rate of his studying per day is ..... hours/day

**( 4 )** A shopkeeper who sells electric sets sold a refrigerator for L.E. 7 000 , if the percentage of this profit was 12 % , then the buying price = L.E. .....

**( 5 ) In the opposite figure :**

ABCD is a parallelogram where AD = 9 cm. , CD = 6 cm. , AC = 12 cm. , then the perimeter of Δ ABC = ..... cm.



( 6 ) The volume of a cuboid is 300 $cm^3$ and the area of its base is 60 $cm^2$ , then its height = ..... cm.

( 7 ) 4.7 $m^3$ = ..... $dm^3$

( 8 ) The following table shows the marks of 20 students in one test , then the number of students whose marks are 20 and less than 30 = ..... students.

| Sets | 10 – | 20 – | 30 – |
|---|---|---|---|
| Number of students | 𝍸 | 𝍸 // | 𝍸 /// |

## 3 Answer the following :

( 1 ) The ratio between the lengths of the sides of a triangle is 2 : 3 : 4 , if the perimeter of the triangle is 54 cm. , find the length of the smallest side.

.....

.....

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.....

( 2 ) A picture of a building is taken with a scale 1 : 300 , if the height of the building in the picture is 5 cm. what is its real height in meters ?

.....

.....

.....

.....

( 3 ) 12 litres of water is poured into a vessel in the shape of a cuboid whose base is a square of side length 20 cm. , find the height of the water in the vessel.

.....

.....

.....

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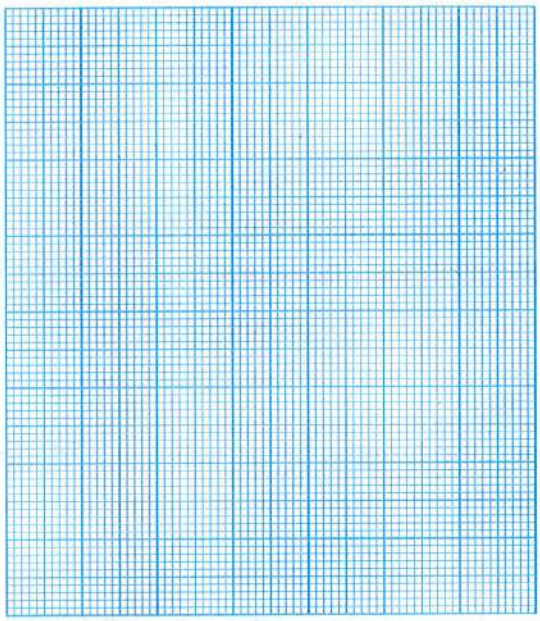
**( 4 ) The following table shows the ages of the visitors of a museum durning one hour of the day :**

| The visitors' ages | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| The visitors' number | 3 | 6 | 7 | 4 | **20** |

Draw the frequency curve of the previous table.



## 14 El-Beheira Governorate

Bandr Damnhour Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{3}{4} = \frac{6}{x}$ , then $x$ = ..... ( 6 **or** 8 **or** 12 **or** 18 )

(2) $\frac{7}{20}$ = ..... % ( 35 **or** 45 **or** 70 **or** 53 )

(3) The two diagonals are perpendicular in .....
( parallelogram **or** rhombus **or** rectangle **or** trapezium )

(4) If the dimensions of a cuboid are equal , then it is a .....
( rectangle **or** square **or** cube **or** triangle )

(5) 25 % of 400 = ..... ( 100 **or** 200 **or** 300 **or** 400 )

(6) If a : b = 3 : 5 and b : c = 5 : 7 , then a : c = .....
( 3 : 5 **or** 7 : 3 **or** 3 : 7 **or** 5 : 7 )

(7) The ratio between the side length of a square and its perimeter = .....
( 1 : 1 **or** 1 : 4 **or** 4 : 1 **or** 1 : 2 )

**2 Complete :**

(1) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = .....

(2) $1\frac{1}{3} : \frac{2}{3}$ = ..... : ..... (in the simplest form)

(3) The range of the values (17 , 15 , 16 , 19) is .....

(4) The ratio between 1.5 pounds : 300 piastres = ..... : .....

(in the simplest form)

(5) The volume of the cuboid = base area × .....

(6) 5.6 litres = ..... $dm^3$

(7) The sum of measures of two consecutive angles in a parallelogram = .....

(8) If the drawing length equals 3 cm. and the real length equals 3 m. , then the drawing scale = ..... : .....

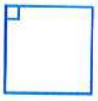
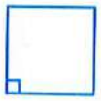
## 3 Choose the correct answer :

(1) All the following data are quantitative except .....

( weight **or** colour **or** volume **or** age )

(2) 1 – (15 % + 45 %) = ..... ( 40 % **or** 14 % **or** 60 % **or** 16 % )

(3)  ..... (in the same pattern)

(  **or**  **or**  )

(4) 3.9 litres = ..... millilitres. ( 39 **or** 3 900 **or** 390 **or** 3.9 )

(5) If a car covered 280 km. in 4 hours , then the rate of covered distance per hour = ..... km./hour ( 70 **or** 80 **or** 284 **or** 7 )

(6) If the lower limit of a set is 10 and upper limit is 20 , then the centre of the set = ..... ( 10 **or** 20 **or** 15 **or** 25 )

(7) 2.4 : 3 = ..... : ..... ( 1 : 2 **or** 4 : 5 **or** 5 : 4 **or** 1 : 3 )

## 4 Answer the following :

(1) If the ratio among the measures of angles of a triangle is 2 : 3 : 4
Calculate the measure of each angle.

.....

.....

.....

.....

(2) Find the cost price of goods sold for L.E. 33 600 with profit percentage 12 %

.....

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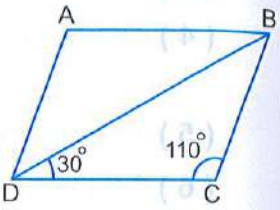
**( 3 ) In the opposite figure :**

ABCD is a parallelogram.

**Find : [a]** m (∠ A)

**[b]** m (∠ ADB)

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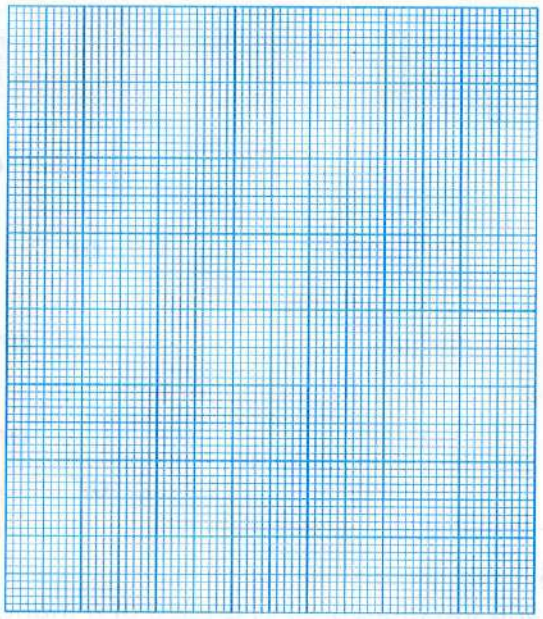
**( 4 ) The following table shows the marks of the students in an exam :**

| Sets | 10 – | 20 – | 30 – | 40 – | Sum |
|---|---|---|---|---|---|
| Frequency | 9 | 12 | 14 | 5 | 40 |

**[a]** Represent these data by the frequency curve.

**[b]** Find the number of students whose marks less than 30

.....



## 15 Beni Suef Governorate

Beba Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer from the brackets :**

**( 1 )** The ratio between 2 kg. and 500 grams is ..... : .....

( 2 : 5 **or** 4 : 1 **or** 1 : 4 **or** 5 : 2 )

**( 2 )** A square is a rectangle when sides are ..... in length.

( different **or** equal **or** more than **or** less than )

( 3 ) The ratio between 50 and 100 = .....

( 3 : 5 **or** 10 : 5 **or** 50 % **or** 5 % )

( 4 ) If A : B = 5 : 2 and B : C = 1 : 2 , then the ratio A : C = .....

( 5 : 4 **or** 2 : 4 **or** 1 : 3 **or** 3 : 3 )

( 5 ) If $\frac{3}{6} = \frac{3}{x}$ , then the value of $x$ = ..... ( 2 **or** 4 **or** 6 **or** 8 )

( 6 ) A factory produces 500 juice cans in 5 hours , the production rate per hour = ..... cans/hour ( 15 **or** 200 **or** 100 **or** 4 )

( 7 ) In a rectangle , each two opposite sides are ..... in length.

( equal **or** not equal **or** more than **or** less than )

## 2 Complete the following :

( 1 ) If $\frac{x}{5} = \frac{4}{y}$ , then $xy$ = .....

( 2 ) The volume of the cube whose edge length is 3 cm. = ..... $cm^3$

( 3 ) If $\frac{x}{4}$ = 25 % , then $x$ = .....

( 4 ) In a parallelogram , each two opposite angles are .....

( 5 ) In a rhombus , ..... are perpendicular.

( 6 ) 40 $m^3$ = ..... $dm^3$

( 7 ) The volume of the cuboid = Area of base × .....

( 8 ) The area of a face in a cube = 49 $cm^2$ , then its edge length = ..... cm.

## 3 Choose the best answer :

( 1 ) <> , ?? , <> , ..... (in the same pattern) ( <> **or** ? **or** ?? **or** # )

( 2 ) A name is a ..... data.

( descriptive **or** quantities **or** shape **or** circle )

( 3 ) How many $cm^3$ in a cube of edge length 7 cm. ?

( 334 **or** 433 **or** 343 **or** 354 )

( 4 ) If the real length of a tree is 3 m. and the length of same tree in picture is 10 cm. , then the drawing scale is ..... : .....

( 30 : 1 **or** 5 : 6 **or** 1 : 30 **or** 6 : 5 )

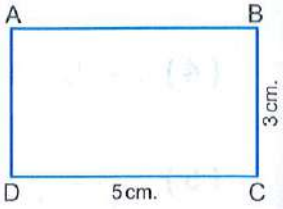
( 5 ) Ali bought a shirt by L.E. 150 with a discount 20 % , then the price of a shirt before discount is L.E. ..... ( 195 **or** 180 **or** 187.5 **or** 150 )

( 6 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 4$ = ..... ( 20 **or** 22 **or** 24 **or** 26 )

( 7 ) $1\frac{1}{2}$ = ..... % ( 15 **or** 150 **or** 200 **or** 60 )

**4** **Answer the following :**

**( 1 ) In the opposite figure :**




**[a]** m (∠ A) = .....

**[b]** The length of $\overline{AB}$ = ..... cm.

**[c]** The perimeter of the shape = .....

**[d]** The area of the shape = .....

**( 2 )** 20 litres of oil were poured in a vessel in the shape of cuboid its base is square of side length 25 cm. Find the height of the oil in the vessel.

.....

.....

.....

## 16 El-Menia Governorate

Samalout Educational Zone
Al-Shaheed Ahmed Abbas G.L.S.

**Answer the following questions :**

**1** **Choose the correct answer :**

**( 1 )** 250 gm. : $\frac{1}{2}$ kg. = ..... : ..... ( 1 : 5 **or** 2 : 1 **or** 1 : 2 )

**( 2 )** If $\frac{4}{x} = \frac{12}{18}$ , then $x$ = ..... ( 6 **or** 8 **or** 4 )

**( 3 )** 1 – (35 % + 47 %) = ..... % ( 19 **or** 81 **or** 18 )

**( 4 )** 55 mL. = ..... $cm^3$ ( 55 **or** 5.5 **or** 55 000 )

**( 5 )** 18 : 6.3 = ..... : ..... ( 7 : 20 **or** 20 : 7 **or** 2 : 70 )

**( 6 )** 39 days ≈ ..... weeks. ( 5 **or** 6 **or** 7 )

**( 7 )** $\frac{1}{4}$ = ..... % ( 25 **or** 50 **or** 75 )

**( 8 )** $\frac{1}{2} : \frac{3}{4}$ = ..... : ..... ( 3 : 2 **or** 3 : 8 **or** 2 : 3 )

**( 9 )** The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
( 2 **or** 4 **or** 6 )

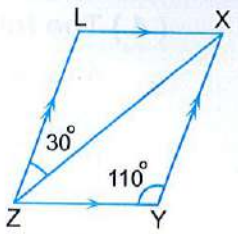
**(10)** The ratio between the side length of the square and its perimeter = ..... : ..... ( 1 : 4 **or** 4 : 1 **or** 1 : 1 )

**(11)** 120 $dm^3$ = ..... $cm^3$ ( 12 **or** 0.12 **or** 120 000 )

**(12)** The following data are descriptive data except .....
( favorite colour **or** age **or** birth place )

**(13)** If distance between two cities on a map is 3 cm. and the real distance between them is 9 km. , then the drawing scale of the map is .....
( 1 : 300 000 **or** 3 : 9 **or** 300 000 : 1 )

**(14) In the opposite figure :**
XYZL is a parallelogram
, then m (∠ LXZ) = ..... °




( 27 **or** 18 **or** 40 )

## 2 Complete the following sentences :

( 1 ) The rate is the ratio between two quantities of ..... kinds.

( 2 ) If the drawing scale < 1 , this expression means .....

( 3 ) The percentage is a ratio .....

( 4 ) If one angle of a parallelogram is right , then is called .....

( 5 ) Ali bought 5 kg. of orange , he paid L.E. 15 , then he will pay L.E. .....
to buy 8 kg.

( 6 ) The sum of lengths of all edges of a cube is 132 cm.
, then its volume = ..... $cm^3$

( 7 ) The volume of the cuboid = ..... × .....

( 8 ) The weight is a ..... data.

## 3 Answer the following :

( 1 ) The perimeter of a rectangle equals 140 cm. and the ratio between its dimensions is 3 : 4 , calculate its area.

.....

.....

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( 2 ) A sweet case in the shop of a cuboid its internal dimensions are 21 cm. , 18 cm. and 6 cm. , it is wanted to full it with pieces of chocolate each of them is a cuboid of dimensions 3 cm. , 3 cm. and 1 cm. , calculate the number of pieces of chocolate which fill the case completely.

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( 3 ) If the cost price of a set of electric appliances is L.E. 72 000 and it is sold at 12 % profit , calculate the selling price.

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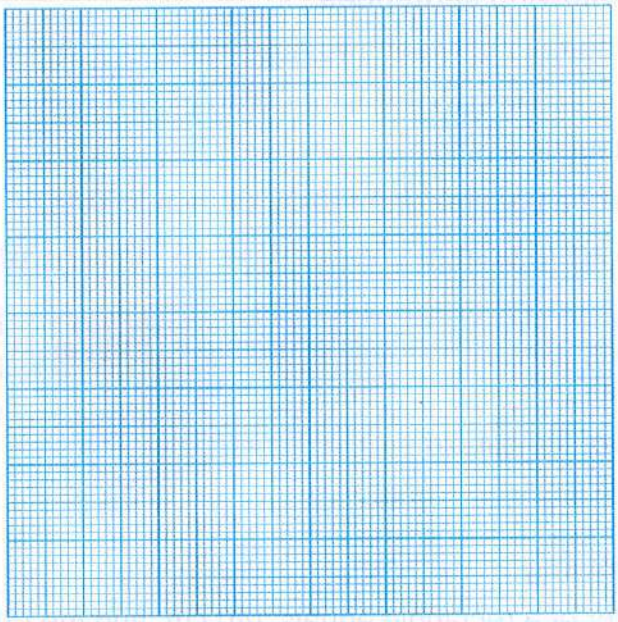
**( 4 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 12 | 11 | 40 |

Represent these data using the frequency curve.



## 17 Assiut Governorate

Manfalot Educational Zone
Mathematics Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) 2.65 litres = ..... $cm^3$ ( 2.65 **or** 26.5 **or** 265 **or** 2 650 )

( 2 ) If the numbers 3 , 4 , $x$ , 12 were in a proportion , then the value of $x$ = ..... ( 3 **or** 7 **or** 9 **or** 24 )

( 3 ) The ..... is the ratio between two quantities of different kinds.

( rate **or** proportion **or** percentage **or** drawing scale )

( 4 ) 8 hours : $3\frac{1}{3}$ days = ..... : .....

( 8 : 9 **or** 1 : 10 **or** 8 : 1 **or** 4 : 5 )

( 5 ) ..... is one of the descriptive data.

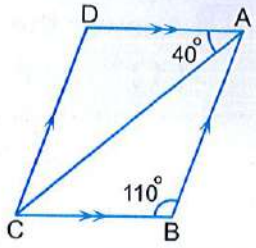
( The weight **or** The age **or** The tall **or** The favorite colour )

( 6 ) A computer printer prints 30 papers each 5 minutes , then the rate of work of this printer = ..... papers/minute ( 6 **or** 25 **or** 35 **or** 150 )

**( 7 ) In the opposite figure :**

ABCD is a parallelogram in which m (∠ B) = 110°
and m (∠ CAD) = 40°
, then m (∠ BAC) = ..... °

( 40 **or** 150 **or** 30 **or** 70 )




## 2 Complete each of the following :

( 1 ) The following figure in this pattern :    is .....

( 2 ) If a : b = 2 : 3 , b : c = 3 : 7 , then a : c = ..... : .....

( 3 ) The volume of a cube of edge length 5 cm. = ..... $cm^3$

( 4 ) If the lower limit of the set = 10 and the upper limit = 20
, then its centre = .....

( 5 ) If the drawing scale > 1 , this expresses .....

( 6 ) If the real length is 5 m. and the drawing length 5 cm. , then the drawing scale = ..... : .....

( 7 ) 1.5 litre + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

( 8 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x - 2$ = .....

## 3 Choose the correct answer :

( 1 ) $\frac{7}{20}$ + 65 % = ..... %

( 1 **or** 100 **or** 72 **or** 92 )

( 2 ) 250 piastres : $7\frac{1}{2}$ pounds = ..... : ..... (in the simplest form)

( 1 : 3 **or** 25 : 35 **or** 250 : 15 **or** 3 : 1 )

( 3 ) The ratio between three numbers is 2 : 3 : 7 and their sum is 60 , then the smallest number is .....

( 2 **or** 10 **or** 35 **or** 70 )

( 4 ) The volume of a cuboid where its base is square-shaped of side length 6 cm. and its height 10 cm. = ..... $cm^3$

( 60 **or** 600 **or** 360 **or** 16 )

( 5 ) In a class there are 50 pupils , if 10 of them are absent , then the percentage of absentees = .....

( 40 % **or** 80 % **or** 20 % **or** 10 % )

( 6 ) A set of marks lies between 57 and 29 , then the range of this set = .....

( 86 **or** 36 **or** 28 **or** 29 )

( 7 ) If one of angle of a parallelogram is right , then it is called a .....

( cube **or** rectangle **or** rhombus **or** triangle )

**4 Answer the following questions :**

**( 1 )** A metallic cube of edge length 9 cm. , it needs to be converted it into ingots in the shape of cuboids each of them of dimensions 3 cm. , 3 cm. , and 1 cm. Calculate the number of ingots that are obtained.

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**( 2 )** A shop keeper of electric sets sold a refrigerator for L.E. 3 180 , if the percentage of his profit is 6 % Find the buying price.

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**( 3 )** In one of our schools , there are 560 students , if the number of girls = $\frac{3}{5}$ the number of boys. Find each of the number of boys and girls.

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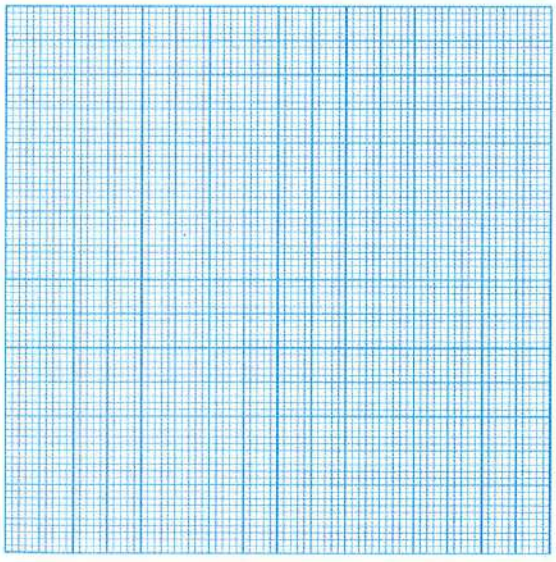
**( 4 ) The following table shows the frequency distribution of marks of 45 pupils in the mathematics exam :**

| **Sets** | 10 – | 20 – | 30 – | 40 – | 50 – | **Total** |
|---|---|---|---|---|---|---|
| **Frequency** | 6 | 8 | 13 | 10 | 8 | **45** |

Represent these data by the frequency curve.



## 18 Qena Governorate

Deshna Educational Directorate
Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) If a : b = 3 : 5 and b : c = 5 : 7 , then a : c = .....

( 6 : 7 **or** 3 : 7 **or** 1 : 2 **or** 2 : 1 )

( 2 ) The two diagonals are equal in length and perpendicular in .....

( square **or** parallelogram **or** rhombus **or** rectangle )

( 3 ) The range of the values 3 , 4 , 9 , 12 , 2 is .....

( 4 **or** 2 **or** 10 **or** 9 )

( 4 ) $\frac{3}{4}$ = ..... % ( 25 **or** 75 **or** 100 **or** 50 )

( 5 ) All of the following are quantitative data except .....

( colour **or** age **or** length **or** date of birth )

( 6 ) If the length of a road in a picture is 3 cm. and the real length is 3 km. , then the drawing scale is ..... ( 100 : 1 **or** 1 : 100 000 **or** 2 : 1 **or** 1 : 1 )

( 7 ) 4.6 litres = ..... mL. ( 46 **or** 4 600 **or** 46 000 **or** 460 )

( 8 ) ABCD is a parallelogram , m (∠ A) = 70° , then m (∠ B) = ..... °

( 70 **or** 110 **or** 90 **or** 180 )

( 9 ) If 4 , $x$ , 12 , 18 are proportional , then $x$ = .....

( 6 **or** 3 **or** 2 **or** 54 )

(10) An agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of the machine in feddan per hour is .....

( $\frac{1}{2}$ **or** 4 **or** 49 **or** 8 )

(11) The volume of the cuboid whose dimensions are 2 cm. , 3 cm. , 5 cm. = ..... $cm^3$ ( 10 **or** 25 **or** 30 **or** 50 )

(12) The ratio between the side length of a square and its perimeter = .....

( 1 : 2 **or** 2 : 1 **or** 3 : 2 **or** 1 : 4 )

(13) A merchant sold good with profit 15 % , if the cost price is L.E. 20 000 , then the profit = L.E. ..... ( 23 000 **or** 15 000 **or** 3 000 **or** 1 500 )

(14) The quadrilateral which all sides are equal in length is .....

( rhombus **or** trapezium **or** parallelogram **or** rectangle )

## 2 Complete the following :

(15) The ratio between the perimeter of an equilateral triangle and its side length = ..... : .....

(16) △ ○ □ △ ○ □ ..... (in the same pattern)

(17) 35 % of 0.5 ton = ..... kg.

(18) A car consumes 20 litres of petrol to cover a distance 250 km. , then the rate of consumption of the car = .....

(19) If $\frac{3}{5} = \frac{x}{20}$ , then $x - 2$ = .....

(20) If A : B = 2 : 5 and B : C = 10 : 9 , then A : B : C = .....

(21) 30 days ≃ ..... weeks. (to the nearest week)

(22) 16 hours : 2 days = ..... : ..... (in the simplest form)

## 3 Solve the following problems :

(23) An amount of money divided into two persons with a ratio 7 : 3 , if the share of first more than the second by 200 pounds , find the share of the second.

.....

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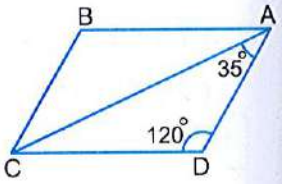
(24) **In the opposite figure :**
ABCD is a parallelogram in which m (∠ D) = 120° , m (∠ DAC) = 35°
Find m (∠ B) and m (∠ CAB)

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(25) Heba bought a mobile phone for 680 pounds with a discount 15 %
Calculate the price of the mobile phone before the discount.

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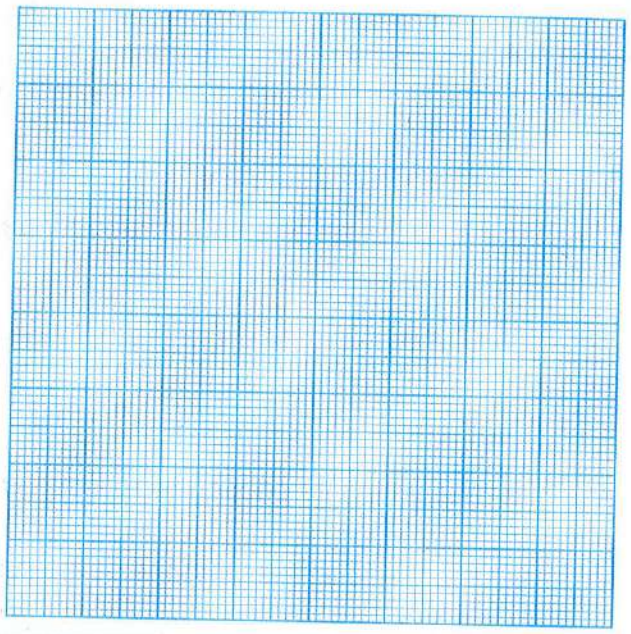
(26) **The table shows the degrees of 100 students in a mathematics exam :**

| Degrees | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 15 | 20 | 35 | 25 | ..... | 100 |

[a] Complete the table.

[b] Draw the frequency curve of this distribution.



## 19 Aswan Governorate

Kom Ombo Educational Directorate
Al-Qahmoury English Lang. School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) 16 : 64 = ..... : ..... (in the simplest form)

( 1 : 2 **or** 1 : 3 **or** 1 : 4 **or** 1 : 5 )

( 2 ) Ahmed drinks 21 glasses of milk weekly , then he drinks ..... glasses of milk every day.

( 3 **or** 9 **or** 6 **or** 12 )

( 3 ) A cube of edge length 3 cm. , then its volume = ..... $cm^3$

( 9 **or** 27 **or** 36 **or** 54 )

( 4 ) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

( 2 **or** 4 **or** 6 **or** 12 )

( 5 ) If the drawing length is 6 cm. and the real length is 6 m. , then the drawing scale = ..... : .....

( 1 : 100 **or** 1 : 1 000 **or** 100 : 1 **or** 1 000 : 1 )

( 6 ) A sum of money 360 pounds distributed between Hani and Ahmed in the ratio of 7 : 5 , then the share of Ahmed is ..... pounds.

( 120 **or** 180 **or** 150 **or** 210 )

( 7 ) 5.3 litres = ..... mL.

( 53 000 **or** 5 300 **or** 530 **or** 53 )

## 2 Complete the following :

( 1 ) In the parallelogram , the sum of measures of any two consecutive angles = ..... °

( 2 ) If A : B = 2 : 3 and B : C = 3 : 5 , then A : C = ..... : .....

( 3 ) The ratio between the side length of a square and its perimeter is ..... : .....

( 4 ) $\frac{1}{4}$ = ..... %

( 5 ) If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = .....

( 6 ) 150 $dm^3$ = ..... litres.

( 7 ) The percentage is a ratio which its second term is .....

( 8 )  ..... (in the same pattern)

## 3 Choose the correct answer :

( 1 ) If the drawing scale < 1 , this expresses .....

( equality **or** magnification **or** enlargement **or** minimization )

( 2 ) If the price of a TV set after discount was 1 800 pounds and the discount was 10 % , then the discount = ..... pounds.

( 90 **or** 110 **or** 180 **or** 200 )

( 3 ) 50 % = ..... ( $\frac{1}{3}$ **or** $\frac{2}{5}$ **or** $\frac{1}{2}$ **or** $\frac{3}{4}$ )

( 4 ) 1 feddan : 36 kirats = ..... : .....

( 1 : 3 **or** 2 : 3 **or** 3 : 2 **or** 3 : 4 )

( 5 ) The dimensions of a cuboid are 4 cm. , 3 cm. and 8 cm. , then its volume = ..... $cm^3$ ( 96 **or** 32 **or** 24 **or** 15 )

( 6 ) The following data are descriptive except .....

( blood type **or** address **or** name **or** age )

( 7 ) 4 300 $cm^3$ = ..... $dm^3$ ( 430 **or** 43 **or** 4.3 **or** 0.43 )

## 4 Answer the following :

( 1 ) If the ratio between the share of Hani , the share of Sherif and the share of Khalid is 3 : 5 : 7 , if the share of Hani is L.E. 24.
Calculate the share of each of Sherif and Khalid.

.....

.....

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.....

( 2 ) If the cost price of a set of electric appliances is L.E. 27 000 and it is sold with profit 12 % Calculate the selling price.

.....

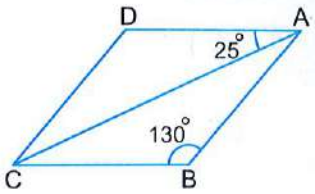
.....

.....

.....

( 3 ) **In the opposite figure :**

ABCD is a parallelogram in which m (∠ B) = 130°
and m (∠ DAC) = 25°
Find : **[a]** m (∠D)
**[b]** m (∠BAC)

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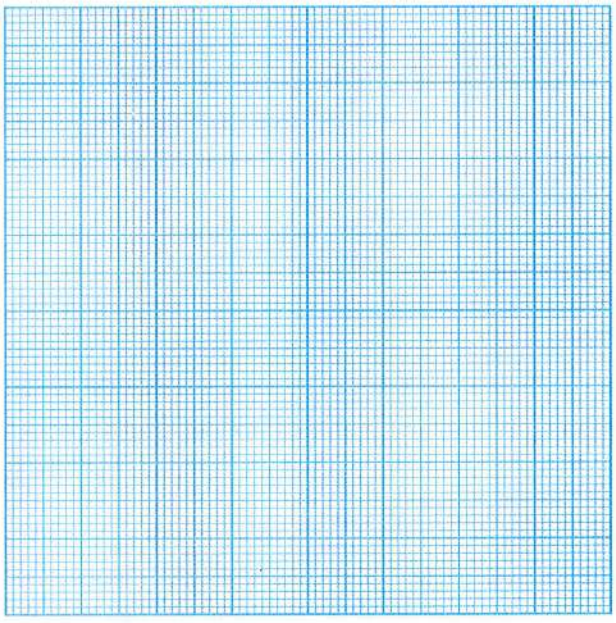
( 4 ) **The following table shows the marks of 50 students in a math test :**

| **Marks** | 10 – | 20 – | 30 – | 40 – | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 5 | 15 | 20 | 10 | **50** |

Represent these data using the frequency curve.



## 20 Matrouh Governorate

Matrouh Educational Zone
Mathematics Inspection

**Answer the following questions :**

**1** **Choose the correct answer :**

( 1 ) $\frac{3}{5}$ = ..... %  ( 30 *or* 50 *or* 60 *or* 80 )

(2) If one angle of a parallelogram is right , then it is called .....
( rectangle **or** square **or** rhombus **or** triangle )

(3) If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = ..... ( 3 **or** 6 **or** 9 **or** 21 )

(4) The range of the values : 5 , 7 , 9 , 12 and 15 is .....
( 5 **or** 7 **or** 8 **or** 10 )

(5) $\frac{2}{3} : \frac{1}{2}$ = ..... ( 3 : 4 **or** 4 : 3 **or** 1 : 3 **or** 2 : 3 )

(6) If the perimeter of one face of a cube is 28 cm.
, then its volume = ..... $cm^3$. ( 64 **or** 49 **or** 343 **or** 28 )

(7) The ratio between the side length of a square and its perimeter is .....
( 4 : 1 **or** 1 : 4 **or** 1 : 3 **or** 1 : $\pi$ )

## 2 Complete :

(1) The sum of measures of two consecutive angles in a parallelogram = .....°

(2) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

(3) The cube has ..... edges.

(4) If the drawing length is 3 cm. and the real length is 5 metres.
, then the drawing scale is .....

(5) If the volume of a cuboid is 400 $cm^3$ and its base area is 50 $cm^2$
, then its height = ..... cm.

(6) The ratio between 18 kirats : 2 feddans = ..... (in the simplest form)

(7) If the range of some values is 35 and the maximum value is 75
, then the minimum value is .....

(8)  ..... (in the same pattern)

## 3 Choose the correct answer :

(1) 4.5 litres = ..... mL. ( 4.5 **or** 45 **or** 450 **or** 4500 )

(2) All of the following data are quantitative except .....
( age **or** weight **or** height **or** blood type )

(3) If the drawing scale > 1 , then this expreeses .....
( enlargement **or** congruency **or** equivalent **or** minimization )

(4) $\frac{1}{2}$ km. : 900 m. = ..... ( 2 : 9 **or** 7 : 8 **or** 5 : 9 **or** 7 : 9 )

(5) The two diagonals are perpendicular and equal in length in .....
( rectangle **or** square **or** rhombus **or** trapezium )

(6) The agricultural machine tractor ploughs 24 feddans in 6 hours
, then its rate = ..... feddans/hour ( 4 **or** 5 **or** 6 **or** 7 )

(7) 35 % of 800 = ..... ( 350 **or** 400 **or** 280 **or** 600 )

**4 Answer the following :**

**( 1 )** If the buying price of electric sets is L.E. 75 000 and sold at 15 % profit. Calculate the selling price.

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.....

**( 2 )** The ratio between the lengths of the sides of a triangle is 2 : 3 : 4 , if the perimeter of the triangle is 63 cm. , find the length of each side of the triangle.

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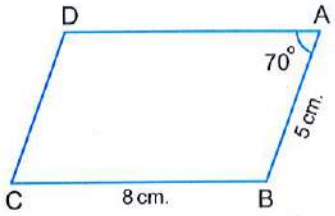
**( 3 ) In the opposite figure :**

ABCD is a parallelogram in which :

m (∠ A) = 70° , AB = 5 cm. and BC = 8 cm.

Find : **[a]** m (∠ D)

**[b]** The perimeter of the figure ABCD

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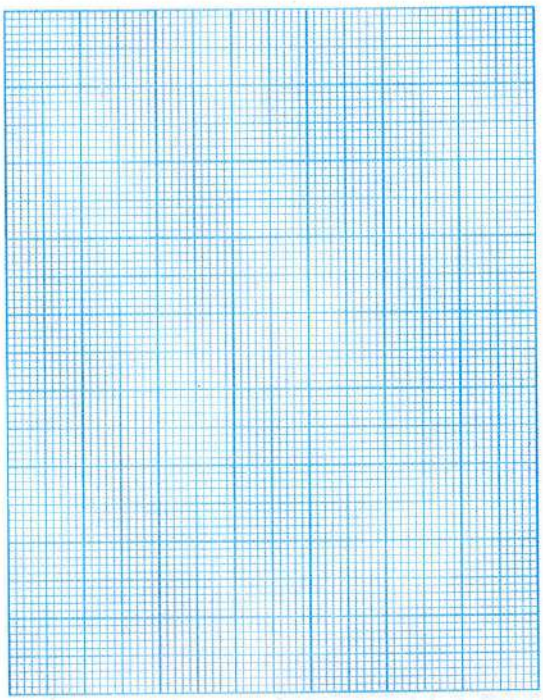
**( 4 ) The following table shows the marks of 100 pupils in mathematics :**

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **No. of pupils** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve for this distribution.



2021

Answer the following questions :

**1 Choose the correct answer :**

(1) $\frac{2}{3} : 2\frac{2}{3}$ = ..... ( 1 : 2 **or** 1 : 3 **or** 1 : 4 **or** 1 : 8 )

(2) If $\frac{x+4}{2} = 5$ , then $x$ = ..... ( 2.5 **or** 6 **or** 10 **or** 14 )

(3) 500 $dm^3$ = ..... litre. ( 0.5 **or** 50 **or** 500 **or** 500 000 )

(4) The range of the values 5 , 4 , 8 , 12 , 7 is .....

( 4 **or** 5 **or** 7 **or** 8 )

(5) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ = ..... ( 2 : 3 : 4 **or** 4 : 3 : 2 **or** 6 : 4 : 3 **or** 6 : 3 : 4 )

(6) If the length in drawing is 2 cm. and the real length is 20 metres , then the drawing scale is 1 : ..... ( 10 **or** 100 **or** 1 000 **or** 10 000 )

(7) If a is half b , and b is twice c , then a : c = .....

( 1 : 1 **or** 1 : 2 **or** 1 : 4 **or** 2 : 1 )

(8) 6 hours : 1 day = ..... ( 1 : 10 **or** 1 : 4 **or** 6 : 1 **or** 4 : 1 )

(9) If 20 % of a number is 80 , then the number = .....

( 16 **or** 40 **or** 400 **or** 1 600 )

(10) The opposite data are quantitative except the .....

( tallness **or** weight **or** favorite colour **or** age )

(11) The base area of a cuboid is 12 $cm^2$ and its volume is 6 $cm^3$ , then its height is ..... cm.

( 2 **or** 6 **or** 72 **or** $\frac{1}{2}$ )

(12) If the sum of the edges lengths of a cube is 12 cm. , then its volume = ..... $cm^3$

( 1 **or** 27 **or** 64 **or** 1 728 )

(13) If a man drinks 3.5 litres of juice weekly , then the rate of what he drinks daily is ..... litre/day

( 3.5 **or** $\frac{1}{2}$ **or** 2 **or** 3 500 )

**2 Complete :**

(1) 250 gm. : $\frac{1}{2}$ kg. in the simplest form = .....

(2) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is ..... hours.

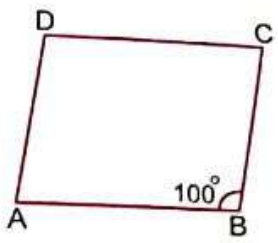
( 3 ) The percentage is a ratio whose second term is .....

( 4 ) If we distribute 300 pounds between two persons , and the first share is $\frac{1}{2}$ the second share , then the share of the first is ..... pounds.

( 5 ) If 2 , $x$ , 6 , 9 are proportional , then $x$ = .....

( 6 ) **In the opposite figure :**

ABCD is a parallelogram , m (∠ B) = 100° , then :




[a] m (∠ A) = .....°

[b] The ratio between m (∠ B) and m (∠ C) = ..... (in the simplest form).

[c] If AB + BC = 10 cm. , then the perimeter of the parallelogram ABCD = ..... cm.

[d] If AB = BC , then the figure ABCD is a called a .....

## 3 Answer the following questions :

( 1 ) Mariam bought a TV set for 1 800 pounds after a discount of 10 %
Calculate the price of the TV before the discount.

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( 2 ) A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

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( 3 ) A map is drawn with a scale 1 : 600 000 , if the distance between two cities on this map is 4 cm. , find the real distance between the two cities in kilometres.

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**( 4 ) The following table shows the marks of 30 pupils in an exam :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of pupils | 6 | 9 | 11 | 4 | 30 |

Draw the frequency curve representing this distribution.

## 2 Cairo Governorate

Nasr City Educational Directorate
Al-Ola Language Modern Schools

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ kg. : 700 gm. = ..... (2 : 7 or 5 : 7 or 7 : 5 or 50 : 7)

(2) If one angle of a paralleogram is right , then it is called a .....
(trapezium or rhombus or cube or rectangle)

(3) 25 % from 200 = ..... (20 or 40 or 50 or 100)

(4) If a : b = 5 : 6 and b : c = 3 : 4 , then a : c = 5 : .....
(7 or 8 or 6 or 9)

(5) If the drawing length is 7 cm. and the real length is 28 metres , then drawing scale = ..... (1 : 4 or 1 : 400 or 400 : 1 or 1 : 40)

(6) The ratio between three numbers is 3 : 4 : 7 and their sum is 70 , then the greatest number = ..... (15 or 35 or 20 or 14)

(7) If $\frac{x-1}{10} = 0.7$ , then $x$ = ..... (7 or 8 or 10 or 9)

(8) The range of data 7 , 3 , 6 , 9 and 5 is ..... (2 or 4 or 6 or 12)

(9) In a class the percentage of the number of girls is 54 % , then the percentage of the number of boys is ..... % (56 or 64 or 46 or 36)

(10) If the dimensions of cuboid is 3 cm. , 4 cm. and 6 cm. , then its volume = ..... $cm^3$. (40 or 60 or 52 or 72)

(11) $\frac{24}{5}$ = ..... ($4\frac{1}{5}$ or $3\frac{2}{5}$ or $4\frac{4}{5}$ or $2\frac{4}{5}$)

(12) In the proportion , the product of the extremes ..... The product the means.

(13) The opposite data are descriptive except .....

( < or > or = or ≠ )

( favorite colour or place of birth or age or blood species )

## 2 Complete :

(14) 18 kirats : 2 feddans = ..... : ..... (in the simplest form)

(15) The ratio between the measures of angles of triangle is 3 : 4 : 5 , then the measure of the smallest angle is .....°

(16) The quadrilateral which each two opposite sides are parallel and equal in length is .....

(17) 1 – (39 % + 41 %) = ..... %

(18) If the distance between two cities on a map is 3 cm. and the real distance between them is 9 km. , then the drawing scale of the map = ..... : .....

(19) If a car consumes 20 litres of fuel to cover a distance of 180 km. , then the number of litres needed to cover 540 km. is .....

(20) 2.5 L. + 500 $cm^3$ = ..... L.

(21) If the numbers 2 , $x$ , 6 and 9 are proportional , then the value of $x$ = .....

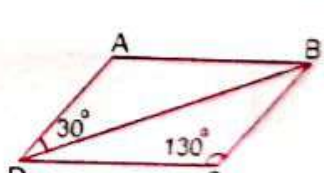
(22) If the perimeter of base of a cube is 16 cm. , then its volume = ..... $cm^3$

## 3 Answer the following :

(23) ABCD is a parallelogram in which

m (∠ C) = 130° , m (∠ ADB) = 30°

Find : m (∠ A) and m (∠ ABD)

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(24) Ahmed studies 21 hours weekly , find the rate of his studying daily.

.....

(25) Samir bought a refrigerator in the time of sale with price L.E. 7 600 after discount 5 % Find the price of refrigerator before discount.

.....

.....

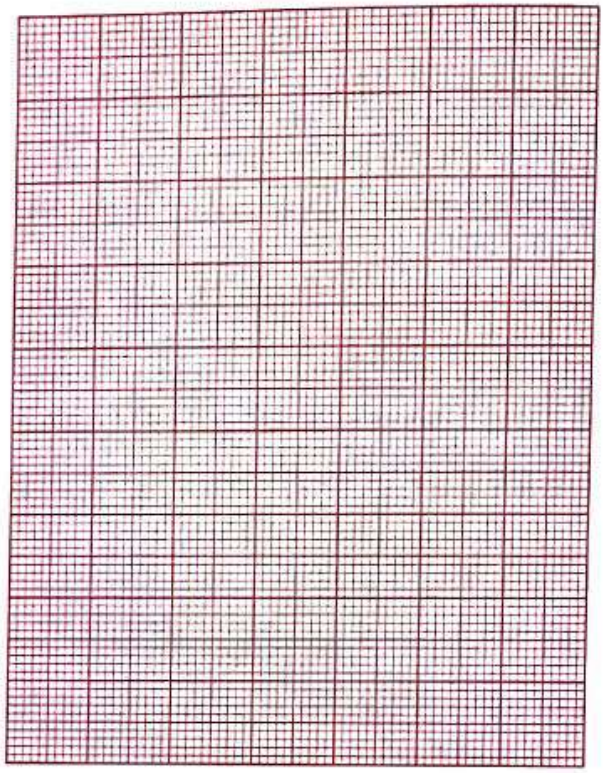
.....

.....

**(26) The following table shows the number of hours which are spent by pupils study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 5 | 3 | 25 |

Draw the frequency curve of these data.



## 3 Giza Governorate

El-Dokki Educational Zone
Orouba Language School

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** $\frac{513}{614}$ ..... $\frac{432}{145}$ ( < **or** > **or** = **or** ≥ )

**( 2 )** 18 kirats : $1\frac{1}{2}$ feddan = ..... : .....

( 2 : 1 **or** 1 : 3 **or** 1 : 4 **or** 1 : 2 )

**( 3 )** If the numbers 2 , $x$ , 8 and 20 are proportional , then $x$ = .....

( 4 **or** 5 **or** 6 **or** 22 )

**( 4 )** All angles of a rectangle are equal in measure and the measure of each of them = .....

( 45° **or** 90° **or** 110° **or** 180° )

**( 5 )** If the ratio between the weight of Ali and the weight of Omar is 3 : 4 and if the weight of Ali is 30 kg. , then the weight of Omar = ..... kg.

( 7 **or** 70 **or** 40 **or** 35 )

(6) 300 $mm^3$ = ..... $cm^3$ ( 0.3 **or** 3 **or** 30 **or** 3 000 )

(7) The following data are descriptive data except .....

( favorite colour **or** birth place **or** age **or** blood species )

(8) In a class the percentage of girls was 46 % from the total numbers of pupils , then the percentage of boys = ..... % ( 46 **or** 100 **or** 54 **or** 146 )

(9) If the real distance between two cities is 9 km. and the distance between them on a map is 3 cm. , then the drawing scale = ..... : .....

( 1 : 3 **or** 1 : 300 **or** 1 : 300 000 **or** 300 000 : 1 )

(10) If A : B = 2 : 3 , B : C = 4 : 5 , then A : C = ..... : .....

( 8 : 15 **or** 15 : 8 **or** 2 : 5 **or** 3 : 5 )

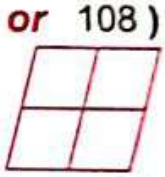
(11) The range of the set of values 35 , 67 , 90 , 48 and 23 is .....

( 12 **or** 67 **or** 113 **or** 58 )

(12) A cube , the area of its base 36 $cm^2$ , then its volume = ..... $cm^3$

( 6 **or** 72 **or** 216 **or** 108 )

(13) The number of a parallelograms that can be obtained = .....



( 4 **or** 5 **or** 7 **or** 9 )

## 2 Complete :

(1) The proportion is .....

(2) The diagonals are perpendicular and not equal in length in .....

(3) 61 days ≃ ..... weeks.

(4) If $\frac{3}{7} = \frac{x}{35}$ , then $x + 2$ = .....

(5) $\frac{4}{10}$ = ..... %

(6) If a car consumes 20 litres of fuel to cover a distance 250 km. , then rate of consumption of fuel = .....

(7) If the drawing scale > 1 , then this expresses .....

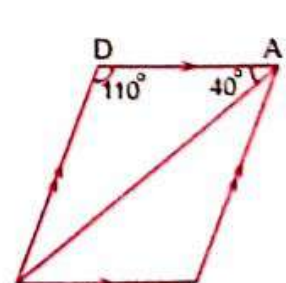
(8) **In the opposite figure :**

ABCD is a parallelogram in which

m (∠ D) = 110° , m (∠ CAD) = 40° , then

m (∠ ACB) = .....

and m (∠ B) = .....




(9) **In the following table :**

| The age | 10 – | 20 – | 30 – | 40 – |
|---|---|---|---|---|
| Number of patients | 6 | 8 | 12 | 9 |

The number of patients less than 30 years = .....

## 3 Answer the following questions :

**( 1 )** If the ratio between the measures of the angles of a triangle is 1 : 2 : 3 , then find the measure of each angle of the triangle.

.....

.....

.....

.....

**( 2 )** A shopkeeper for electric sets sold a TV set for L.E. 3 180 , if the percentage of his profit is 6 % , then find the buying price and find the profit.

.....

.....

.....

.....

**( 3 )** 10 litres of oil were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the oil in the vessel.

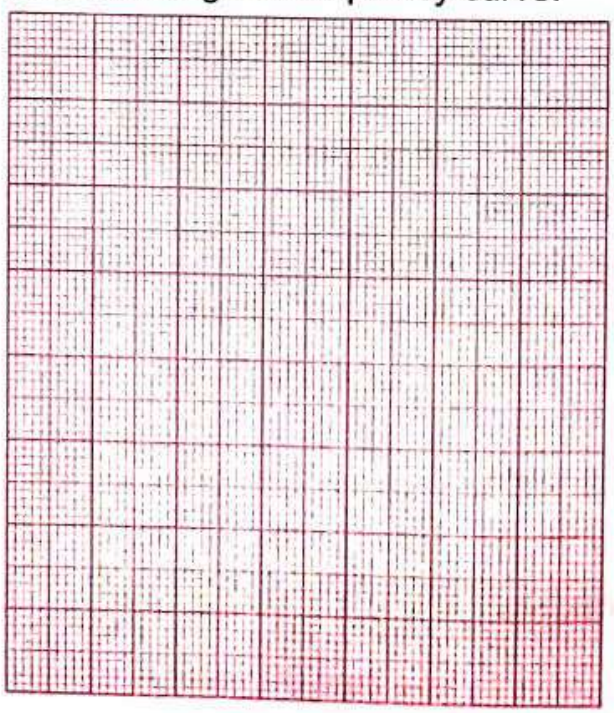
.....

.....

**( 4 ) The following table shows the extra money which 100 workers got in one month in a factory :**

| The extra money | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of workers | 15 | 20 | 35 | 20 | 10 | 100 |

Represent these data using the frequency curve.



# 4 Giza Governorate

Omraneya Educational Administration
El-Farouk Private School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) From descriptive data .....

( blood species **or** height **or** weight **or** age )

( 2 ) If $\frac{3}{5} = \frac{x}{10}$ , then $x : 12$ = ..... ( 1 : 2 **or** 3 : 2 **or** 1 : 3 **or** 3 : 5 )

( 3 ) 0.35 = ..... % ( 3.5 **or** 0.35 **or** 35 **or** 350 )

( 4 ) The next shape in the pattern  is .....

(  **or**  **or**  **or**  )

( 5 ) The sum of lengths of all edges of a cube is 72 cm. , then its edge length = ..... cm. ( 4 **or** 6 **or** 8 **or** 9 )

( 6 ) The range of the set of values 22 , 39 , 62 , 54 = ..... ( 40 **or** 17 **or** 15 **or** 24 )

( 7 ) The ratio $\frac{3}{4} : \frac{5}{6}$ = ..... : ..... (in the simplest form) ( 3 : 5 **or** 9 : 10 **or** 4 : 5 **or** 1 : 2 )

( 8 ) If one angle of a parallelogram is right , then it is called a ..... ( rhombus **or** rectangle **or** trapezium **or** square )

( 9 ) If $\frac{A}{B} = \frac{C}{D}$ , then ..... ( $(A \times D = B \times C)$ **or** $(A \times B = C \times D)$ **or** $(A \times C = B \times D)$ )

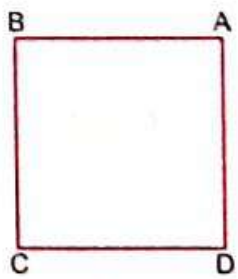
(10) A cuboid its base area is 20 $cm^2$ and its height is 6 cm. , then its volume = ..... $cm^3$ ( 60 **or** 120 **or** 720 **or** 600 )

(11) In proportion , the product of the extremes ..... The product of the means. ( > **or** = **or** < )

(12) **In the opposite figure :**

ABCD is a square , then the ratio between AB : CD = ..... : .....

( 1 : 1 **or** 1 : 2 **or** 1 : 3 **or** 2 : 1 )




(13) $cm^3$ is the measuring unit of ..... ( capacity **or** volume **or** area **or** perimeter )

**2 Complete :**

( 1 ) 18 kirats : 2 feddans = ..... : ..... (in its simplest form)

(2) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

(3) 1 – 75 % = ..... %

(4) A car covers 240 km. in 3 hours , then the rate of what the car covers is ..... km./h.

(5) If the real length of an insect is 2 mm. and its length after enlargement is 4 cm. , then the drawing scale is ..... : .....

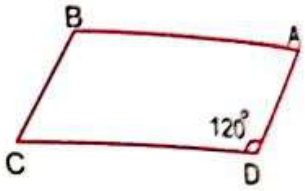
(6) The four angles are right in each of ..... and .....

(7) The number of faces of a cuboid = ..... faces.

(8) **In the opposite figure :**

ABCD is a parallelogram , then

m (∠ C) = .....°




(9) A cube of edge length = 6 cm. , then its volume = ..... $cm^3$.

## 3 Answer the following :

(1) If the ratio between the length of two pieces of cloth is 6 : 8 and the sum of their lengths is 126 cm. , calculate the length of each piece.

.....

.....

.....

.....

(2) The volume of a cuboid is 54 $cm^3$. , its base is square shaped of side length 3 cm. , calculate its height.

.....

.....

.....

(3) A man put 3 000 L.E. in a bank with an interest 10 % Calculate the sum of the money after a year.

.....

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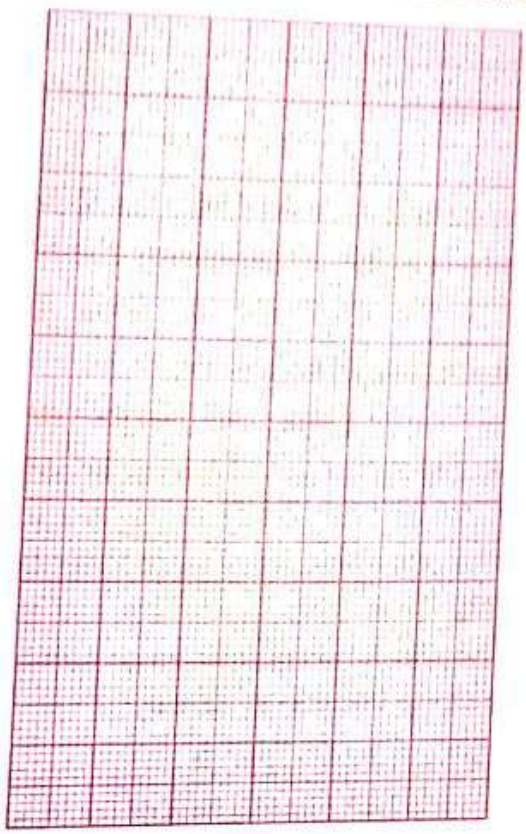
.....

.....

**( 4 ) Using the following table , draw the frequency curve :**

| Set | 5 – | 10 – | 15 – | 20 – |
|---|---|---|---|---|
| Frequency | 4 | 8 | 10 | 4 |



## 5 Alexandria Governorate

El-Montaza Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer from the brackets :**

**( 1 )** The ratio between 16 , 64 in the simplest form = ..... : .....
( 1 : 4 **or** 2 : 8 **or** 1 : 8 **or** 2 : 4 )

**( 2 )** The ratio between the side length of an equilateral triangle and its perimeter = ..... : ..... ( 3 : 1 **or** 1 : 2 **or** 1 : 3 **or** 1 : 4 )

**( 3 )** If Hazem studies 21 hours weekly , then the rate of his studying daily = ..... hours per day. ( 7 **or** 3 **or** 14 **or** 147 )

**( 4 )** If $\frac{5}{8} = \frac{15}{x}$ , then $x$ = ..... ( 42 **or** 5 **or** 15 **or** 24 )

**( 5 )** If the percentage of the number of girls in a class which is mixed is 67 % , then the parcentage of the number of boys in this class = ..... %
( 100 **or** 167 **or** 33 **or** 67 )

(6) The original price for a shirt is 65 pounds with a discount 15 % , then the paid value = ..... pounds. ( 5 525 or 55.25 or 25.55 or 55 )

(7) $\frac{3}{4}$ = ..... (in decimal fraction). ( 0.2 or 0.5 or 0.25 or 0.75 )

(8) A parallelogram is called rectangle if the measure of one of its angles = .....°

( 80 or 90 or 91 or 180 )

(9) Description of the pattern ▽○□▽○□ is repetition for .....

( ▽ or ▽□ or ▽○□ or ○ )

(10) 700.5 $cm^3$ = ..... $mm^3$ ( 7 005 or 700 500 or 1 000 or 75 )

(11) The cubic centimetre is a unit of measuring .....

( volume or area or perimeter or length )

(12) The following data are quantitative except .....

( age or height or birth place or weight )

(13) The range = the maximum value □ the minimum value

( × or − or + or ÷ )

## 2 Complete the following :

(1) When comparing between two quantities or numbers of the same type and same units the resulting fraction is called .....

(2) If a : b = 2 : 3 , b : c = 3 : 5 , then a : c = ..... : .....

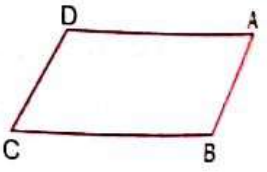
(3) If the ratio between the two dimensions of rectangle is 3 : 4 and its perimeter is 140 cm. , then its area = ..... $cm^2$

(4) The ratio between 250 piastres , $7\frac{1}{2}$ pounds = ..... : ..... (in the simplest form)

(5) $1\frac{3}{4}$ = ..... %

(6) **In the opposite figure :**

ABCD a parallelogram , m (∠ A) + m (∠ B) = .....°




(7) 1 $m^3$ = ..... litres.

(8) The sum of the edge lengths of a cube is 132 cm. , then its volume = ..... $cm^3$

(9) The following table shows the marks of 50 students in math exam :

| The marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 15 | 20 | 10 | 50 |

Then the number of students who got less than 40 marks = ..... students.

**3 Answer the following : (Write the steps of the solution)**

( 1 ) The number of pupils in a primary school in the 1st , the 2nd and the 3rd grades is 240 pupils , if the ratio among the three grades is 5 : 4 : 3 , calculate the number of pupils in each grade.

.....

.....

.....

( 2 ) If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. , find its real length in km.

.....

.....

.....

( 3 ) 8 400 $cm^3$ of water is poured into a vessel in the shape of cuboid with internal dimensions 20 cm. , 35 cm. and 45 cm. Find the volume of water needed to be added for the vessel becomes filled with water completely.

.....

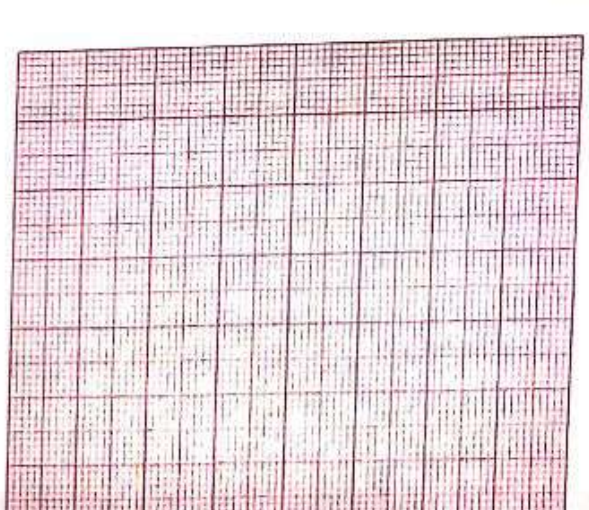
.....

.....

( 4 ) **The following table shows the extra money which 100 workers got in a month in a factory :**

| The extra money | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – | Total |
|---|---|---|---|---|---|---|---|
| Number of workers | 20 | 15 | 30 | 20 | 10 | 5 | 100 |

Draw the frequency curve for this data.



## 6 El-Kalyoubia Governorate

Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{3}{4}$ = ..... (in decimal form). ( 0.2 **or** 0.5 **or** 0.25 **or** 0.75 )

(2) The cube has ..... edges. ( 4 **or** 6 **or** 8 **or** 12 )

(3) If $\frac{4}{6} = \frac{12}{x}$ , the $x + 2$ = ..... ( 16 **or** 18 **or** 20 **or** 22 )

(4) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 10 **or** 1 : 100 **or** 1 : 1 000 )

(5) If the numbers 4 , $x$ , 12 and 18 are proportional , then $x$ = ..... ( 16 **or** 10 **or** 4 **or** 6 )

(6) The range of the set of values 7 , 3 , 6 , 9 and 5 is ..... ( 2 **or** 4 **or** 6 **or** 12 )

(7) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to ploughs 42 feddans is ..... hours. ( 4 **or** 6 **or** 7 **or** 8 )

(8) ABCD is a parallelogram in which m (∠ B) = 100° , then m (∠ D) = ..... ( 120° **or** 60° **or** 100° **or** 50° )

(9) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 , if the weight of Ahmed is 60 kilograms , then the weight of Hani = ..... kilograms. ( 25 **or** 50 **or** 60 **or** 30 )

(10) The two diagonals are equal in length and perpendicular in ..... ( rectangle **or** square **or** parallelogram **or** rhombus )

(11) $\frac{3}{10}$ = ..... % ( 40 **or** 33 **or** 30 **or** 70 )

(12) The following data are descriptive data except ..... ( favorite colour **or** age **or** birth place **or** blood species )

(13) Complete in the same pattern : □ ○ △ □ ○ △ ..... ( □ ○ △ **or** □ △ **or** ○ □ △ **or** ○ △ )

**2 Complete the following :**

(1) 5 000 grams : 8 kilograms = ..... (in the simplest form).

(2) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

(3) If the ratio between the measures of the angles of a triangle is 2 : 3 : 4 , then the measure of the greatest angle = .....

(4) 3 litres = ..... $cm^3$

(5) A wooden box in the form of a cube ، its external volume is 1 000 $cm^3$ ، its capacity is 729 $cm^3$ ، then the volume of the wood of the box = ..... $cm^3$

(6) The following table shows the marks of 40 students in one test ، then the number of students who got less than 30 marks = .....

| Marks | 10 – | 20 – | 30 – 40 |
|---|---|---|---|
| Number of students | 10 | 13 | 17 |

(7) If A : B = 2 : 3 ، B : C = 3 : 5 ، then A : C = .....

(8) The ratio between the side length of the square and its perimeter = .....

(9) The area of the triangle = $\frac{1}{2}$ × ..... × .....

## 3 Answer the following :

(1) Heba bought a mobile for 680 pounds with a discount 15 % Calculate the price of this mobile before the discount.

.....

.....

.....

(2) Two persons started a commercial business ، the first paid 5 000 pounds and the second paid 8 000 pounds ، at the end of the year the net profit was 3 900 pounds. Calculate the share of each of them from the profit.

.....

.....

.....

(3) A metallic cube of edge length is 12 cm. ، it needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. ، 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

.....

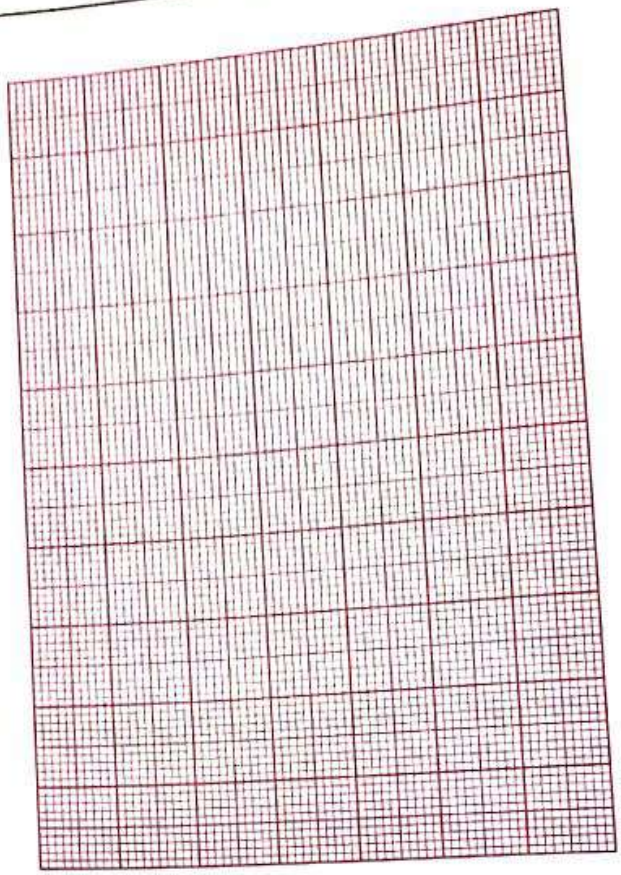
.....

.....

(4) **The following table shows the number of hours which spend by 30 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 3 | 4 | 9 | 8 | 6 | 30 |

Represent these data using the frequency curve.



## 7 El-Sharkia Governorate

East Zagazig Educational Directorate
Omar Al-Farouk Formal School

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** 3 litres = ..... $cm^3$. ( 3 **or** 30 **or** 300 **or** 3 000 )

**( 2 )** The range of the set of values 2 , 3 , 6 , 9 and 5 is .....

( 4 **or** 7 **or** 6 **or** 12 )

**( 3 )** The percentage is a ratio its second term is .....

( 10 **or** 100 **or** 1 000 **or** 10 000 )

**( 4 )** The ratio between the two numbers 2.4 and 3.6 = ..... : .....

( 1 : 4 **or** 2 : 3 **or** 3 : 6 **or** 1 : 16 )

**( 5 )** If 2 , 5 , X , 15 are proportional , then X = .....

( 2 **or** 5 **or** 6 **or** 15 )

**( 6 )** The diagonals are equal in length in .....

( trapezium **or** rectangle **or** rhombus **or** triangle )

(7) 18 kirats : 1 feddan = ..... : .....

(1 : 2 or 3 : 8 or 1 : 24 or 3 : 4)

(8) $\frac{2}{3} : 3\frac{1}{3}$ = ..... : .....

(1 : 3 or 1 : 2 or 2 : 3 or 1 : 5)

(9) If the drawing scale < 1 , this expresses .....

(equality or maximization or enlargement or minimization)

(10) The consequent of the ratio 3 : 11 is ..... (3 or 5 or 11 or 2)

(11) The ratio between the side length of the square to its perimeter is ..... : ..... (1 : 2 or 1 : 3 or 4 : 1 or 1 : 4)

(12) The following data are descriptive data except .....

(length or birth place or name or favorite colour)

## 2 Complete :

(1) $\frac{3}{4}$ = ..... %

(2) 1 – (25 % + 30 %) = ..... %

(3) The volume of a cuboid is 64 $cm^3$ , and area of its base is 16 $cm^2$ , then its height = ..... cm.

(4) $\frac{2}{5} = \frac{x}{20}$ , then $x$ = .....

(5) If the real length of a tree is 6 m. , and its drawing length is 3 cm. , then the drawing scale = ..... : .....

(6) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

(7) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of performance is .....

(8) If A : B = 1 : 2 , B : C = 3 : 5 , then A : C = ..... : .....

## 3 Answer the following questions :

(1) If the buying price of electric sets is L.E. 60 000 and sold at 10 % profit. Calculate the selling price.

.....

.....

.....

(2) A container has 24 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is 400 $cm^3$. Calculate the number of bottles.

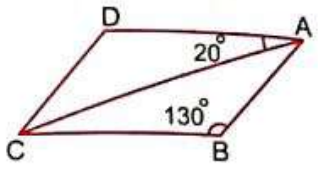
.....

.....

.....

**( 3 ) In the opposite figure :**

ABCD is a parallelogram , then find :




**[a]** m (∠ D) = .....°

**[b]** m (∠ ACD) = .....°

**( 4 )** The ratio among the measurements of the angles of a triangle is 3 : 7 : 8 , find the measure of each angle in the triangle.

.....

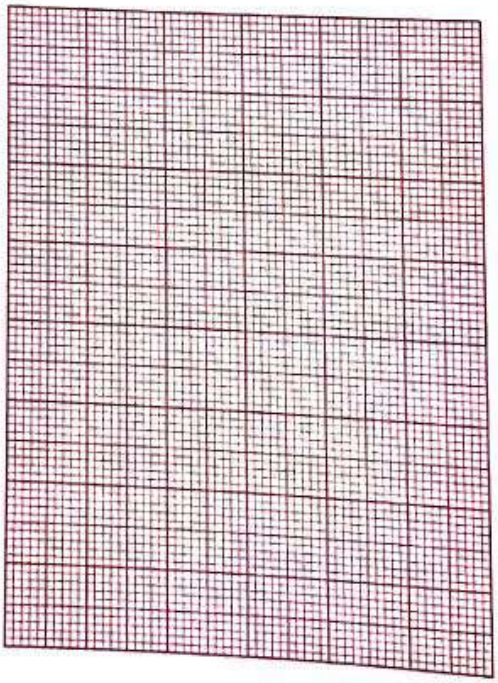
.....

.....

**( 5 ) The following table shows the marks of 100 pupils in one of the math tests :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of pupils | 15 | 30 | 40 | 15 | 100 |

Draw the frequency curve for this distribution.



## 8 El-Monofia Governorate

Ashmoun Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** The ratio between 5 000 gm. and 8 kg. is .....

( 5 : 8 **or** 5 : 80 **or** 8 : 5 **or** 80 : 5 )

(2) 65 $cm^3$ = ..... mL. ( 0.065 **or** 6.5 **or** 65 **or** 0.65 )

(3) If the numbers 3 , 5 , $x$ and 10 are proportional , then $x$ = .....
( 8 **or** 6 **or** 12 **or** 15 )

(4) A cuboid its base area is 40 $cm^2$ and its height is 5 cm. , then its volume is ..... $cm^3$ ( 200 **or** 2 000 **or** 45 **or** 8 )

(5) The following data are descriptive except .....
( job **or** religion **or** weight **or** hoppy )

(6) A car covers 720 km. in 6 hours , then its rate = ..... km./hr.
( 20 **or** 120 **or** 12 **or** 160 )

(7) $\frac{3}{5}$ = ..... % ( 15 **or** 40 **or** 60 **or** 80 )

(8) If the edge length of a cube is 5 cm. , then the sum of all edges = ..... cm.
( 125 **or** 15 **or** 60 **or** 25 )

(9) If the real length is 6 m. and its drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 1 **or** 100 : 1 **or** 1 : 1 000 **or** 1 : 100 )

(10) If the values of frequency distribution lie between (19 , 49) , then the range of this distribution = ..... ( 30 **or** 68 **or** 49 **or** 19 )

(11) All angles are right and the two diagonals are perpendicular in .....
( rectangle **or** rhombus **or** square **or** parallelogram )

(12) $\frac{5}{7} : \frac{3}{7}$ = ..... : ..... ( 5 : 3 **or** 3 : 5 **or** 3 : 7 **or** 5 : 7 )

(13) A trader sold some goods by losing percentage 20 % , then the percentage of the selling price was ..... % ( 120 **or** 80 **or** 20 **or** 100 )

## 2 Complete the following :

(1) A cube its base area is 25 $cm^2$ , then its volume = ..... $cm^3$

(2) If 7 : 13 = $x$ : 52 , then $x$ = .....

(3) The drawing scale = ..... : .....

(4) 32 % + 27 % + ..... = 100 %

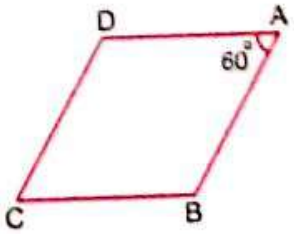
(5) The types of the statistical data are ..... and .....

(6) **In the opposite figure :**

ABCD is a parallelogram

, m ($\angle$ A) = 60°

, then m ($\angle$ B) = .....




(7) If the volume of a cuboid is 36 $cm^3$ , and its height is 4 cm. , then its base area = ..... $cm^2$

( 8 ) An agricultural machine ploughs 18 feddans in 3 hours , then its performance rate is ..... feddans/hour

**3 Answer the following :**

( 1 ) If the drawing scale of a map is 1 : 1 000 000 and the real length between two cities is 20 km. Find the distance between them on this map.

.....

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.....

( 2 ) Mona bought a TV set with discount 20 % from the declared price which was 2 500 pounds. Find its price after discount.

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( 3 ) A box in the shape of a cuboid with dimensions 36 cm. , 42 cm. and 24 cm. If it is filled with small cubes of edge length 6 cm. , find the number of these cubes.

.....

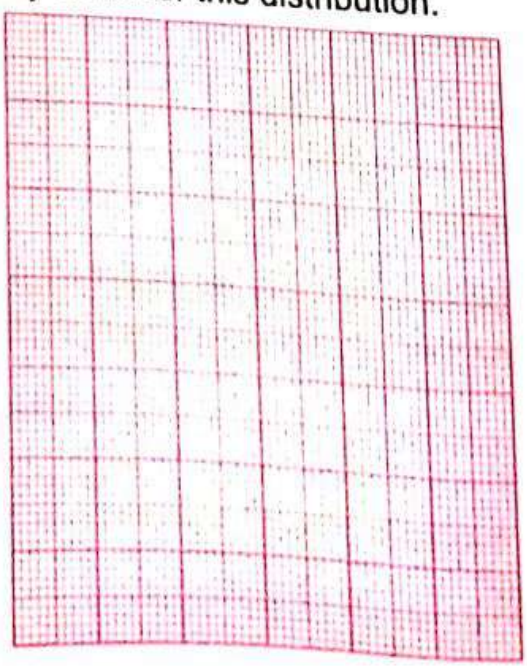
.....

.....

( 4 ) **The following table shows the marks of 90 students in one month in math :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 90 |

Draw the frequency curve for this distribution.



Answer the following questions :

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ an hour : 36 minutes = ..... : .....

( 3 : 6 **or** 2 : 3 **or** 5 : 6 **or** 1 : 2 )

(2) Parallelogram in which its diagonals are perpendicular and not equal in length called a .....

( rectangle **or** rhombus **or** trapezium **or** square )

(3) Hassan spends L.E. 75 within three days , then the rate of what Hassan spends = ..... L.E./day ( 25 **or** 30 **or** 45 **or** 135 )

(4) 4 $m^3$ = ..... $dm^3$ ( 40 **or** 400 **or** 4 000 **or** 40 000 )

(5) If the length of a road in map of drawing scale 1 : 10 000 is 15 cm. , then its real length in km. equals .....

( 1.5 **or** 165 **or** 170 **or** 185 )

(6) The range of values : 7 , 3 , 6 , 9 is ..... ( 3 **or** 4 **or** 12 **or** 6 )

(7) If the ratio among the measures of angles of a triangle is 2 : 3 : 4 , then the measure of the smallest angle is ..... ° ( 40 **or** 60 **or** 80 **or** 180 )

**2 Choose the correct answer :**

(1) If the area of one face of a cube = 4 $cm^2$ , then its volume is ..... $cm^3$

( 6 **or** 24 **or** 8 **or** 64 )

(2) A merchant sold his goods with profit 15 % , then the percentage of the selling price = ..... % ( 15 **or** 85 **or** 115 **or** 150 )

(3) The line segment resulted from intersection of two faces is called .....

( vertex **or** edge **or** diagonal **or** face )

(4) 0.0375 = ..... % ( 0.375 **or** 3.75 **or** 37.5 **or** 375 )

(5) If ABCD is a parallelogram , then m (∠ A) + m (∠ B) = ..... °

( 90 **or** 180 **or** 360 **or** 108 )

(6) If $\frac{x + 12}{6} = 4$ , then $x$ = ..... ( 4 **or** 6 **or** 24 **or** 12 )

**3 Complete the following :**

(1) The side length of a square = 3 cm. , then the ratio between its side length and its perimeter equals .....

( 2 ) The base of a cuboid is a square , its volume is 2 000 $cm^3$ and its height is 5 cm. , then the side length of its base is ..... cm.

( 3 ) If a : b = 2 : 3 and b : c = 4 : 5 , then a : c = ..... : .....

( 4 ) The age is ..... data.

( 5 ) The circumference of the circle : the length of its diameter = ..... : .....

( 6 ) The rhombus whose one of its angles is right is called .....

( 7 ) The third proportional of the numbers : 0.8 , 4.8 and 12 is .....

( 8 ) 1.5 litres + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

( 9 ) 15 % of ..... = 75

## 4 Answer the following :

( 1 ) A piece of land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 square metres. Find the area of the land and the share of each of the first and the second.

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.....

( 2 ) If the sum of lengths of all edges of a cube equals 132 cm. , calculate its volume.

.....

.....

( 3 ) Khaled bought a flat for L.E. 150 000 , after selling it , he found that the percentage of his loss was 15 % Calculate the selling price of the flat.

.....

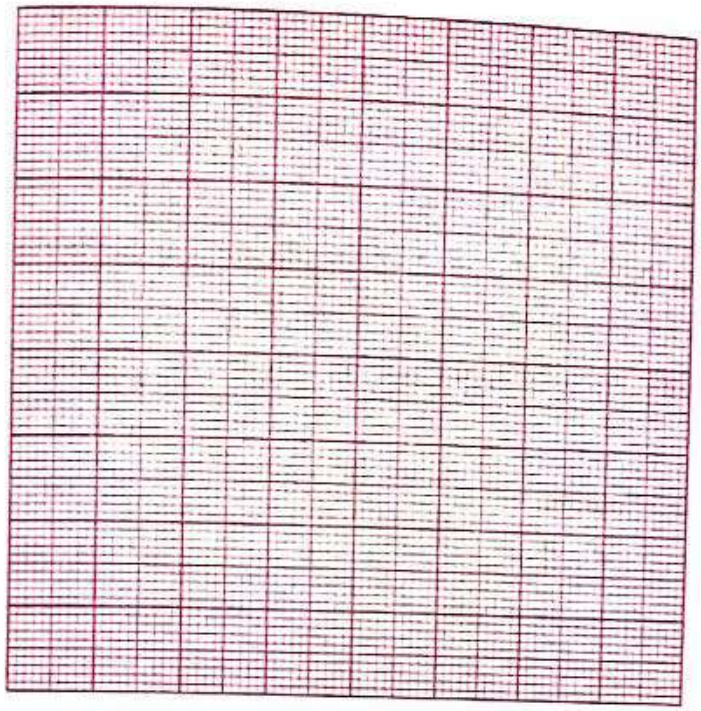
.....

.....

**( 4 ) The following table shows the numbers of hours which are spent by 46 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – | 6 – | Total |
|---|---|---|---|---|---|---|---|
| Number of pupils | 8 | 11 | 15 | 6 | 4 | 2 | 46 |

Represent this data by the frequency curve.



## 10 El-Dakahlia Governorate

East Mansoura Educational Zone
Maths Supervision

**Answer the following questions :**

**1 Complete the following :**

(1) If $\frac{x}{9}$ = 15 % , then $x$ = .....

(2) A rectangle will be a square if its diagonals are .....

(3) $\frac{3}{4} + 5\frac{1}{2} = 7 -$ .....

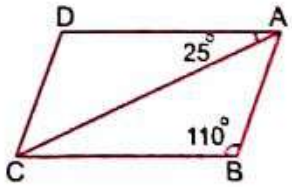
(4) If the length of an insect in a picture is 10 cm. and its real length 2 mm. , then the drawing scale is ..... : .....

(5) If A : B = 4 : 3 , B : C = 2 : 3 , then A : C = .....

(6) **In the opposite figure :**

ABCD is a parallelogram , then :

m (∠ ACD) = ..... °




(7) 8 400 $cm^3$ of water is poured into a vessel in shape of cuboid with base area 700 $cm^2$ , then its height = ..... cm.

(8) The number of sets = the range ÷ .....

(9) An agriculture tractor polughs 28 feddans in 4 hours , then the rate of the tractor = ..... feddans/hour

## 2 Choose the correctt answer :

(1) 9.52 litres = ..... $dm^3$. ( 9.52 **or** 95.2 **or** 9 520 **or** 95 200 )

(2) The following data are descriptive data except .....

( colour **or** age **or** birth place **or** blood type )

(3) If the drawing scale ..... 1 , this express enlargement.

( > **or** = **or** < **or** ≤ )

(4) The sum of all edges of a cube is 132 cm. , its volume = ..... $cm^3$.

( 11 **or** 33 **or** 121 **or** 1 331 )

(5) 12 kirats : 1.25 feddan = ..... ( 5 : 2 **or** 2 : 5 **or** 1 : 2 **or** 120 : 125 )

(6) If $\frac{2}{5} = \frac{x}{15}$ , then $x - 2$ = ..... ( 4 **or** 5 **or** 6 **or** 15 )

(7) The product of the extremes ..... The product of means.

( > **or** = **or** < )

## 3 Answer the following :

(1) A company for selling the electric sets shows a TV set for 2 300 L.E. , if the percentage of profit is 12 % Find the buying price of the TV set.

.....

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.....

(2) The ratio between the length and the width of a rectangle is 9 : 5 , if the perimeter of the rectangle is 56 cm. Find out the length and the width , then calculate its area.

.....

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.....

## 4 Choose the correct answer :

(1) $\frac{13}{20}$ = ..... % ( 0.65 **or** 6.5 **or** 65 **or** 650 )

(2) If the numbers 1 , 4 , $x$ , 28 are proportional , then $x$ = .....

( 1 **or** 4 **or** 7 **or** 28 )

(3) The parallelogram with right angle is called .....

( rectangle **or** square **or** rhombus **or** trapezium )

(4) The ratio between the perimeter of a square and its side length = .....
(1 : 4 **or** 4 : 1 **or** 1 : 3 **or** 3 : 1)

(5) The range of the set of values (29 , 33 , 57 , 40 , 36 , 39) is .....
(28 **or** 32 **or** 33 **or** 86)

(6) 10 litres of water were poured in a vessel as a cuboid with square base of side length 25 cm. , then the height of water = ..... cm.
(400 **or** 40 **or** 16 **or** 2.5)

## 5 Answer the following :

(1) A cube shaped vessel , its internal edge is 30 cm. and it is filled with oil.

[a] Calculate the capacity of the vessel.

[b] If the price of one litre of oil is 9.5 pounds. Calculate the price of all oil.

.....

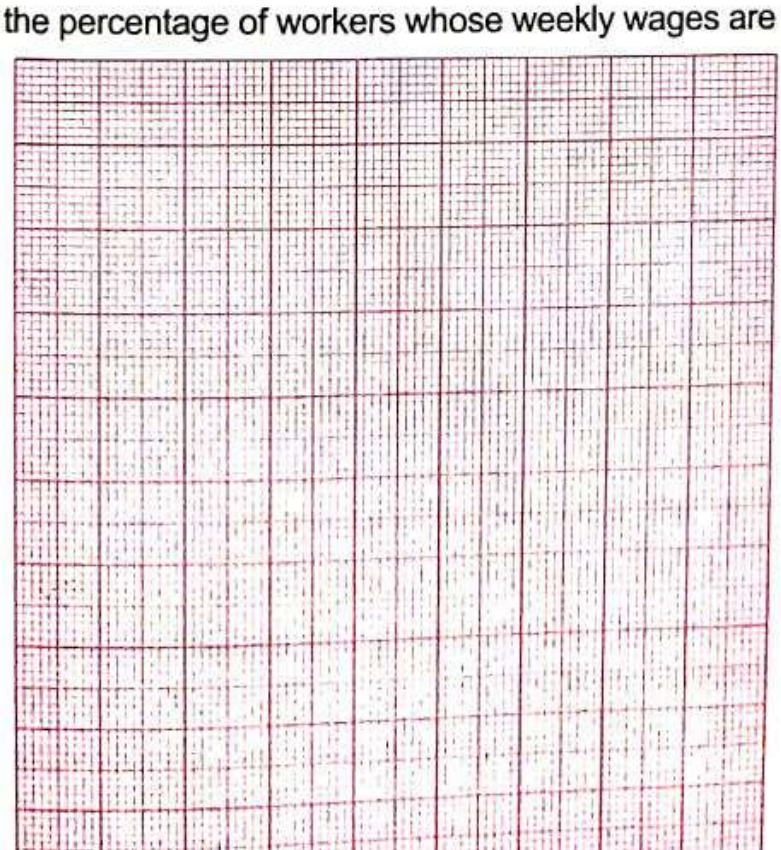
.....

(2) **The following table shows the distribution of the weekly wages of 60 workers in a factory :**

| **Weekly wages** | 50 – | 60 – | 70 – | 80 – | 90 – | 100 – | 110 – | **Total** |
|---|---|---|---|---|---|---|---|---|
| **No. of workers** | 6 | 8 | 12 | 18 | 10 | 4 | 2 | **60** |

[a] Draw the frequency curve of the distribution.

[b] Find the percentage of workers whose weekly wages are 100 L.E. and more.



nswer the following questions :

**1 Choose the correct answer :**

(1) If A : B = 2 : 5 , then $\frac{A}{A+B}$ = ..... : .....

( 1 : 2 **or** 2 : 7 **or** 3 : 5 **or** 2 : 9 )

(2) $\frac{3}{7} \times \frac{7}{3}$ = ..... %

( 50 **or** 70 **or** 80 **or** 100 )

(3) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

( 9 **or** 7 **or** 6 **or** 3 )

(4) If $\frac{8}{x}$ = 0.5 , then $x$ = .....

( 4 **or** 8 **or** 16 **or** 40 )

(5) A factory produces 4 000 cans of juice during 8 hours , then the rate of the production is ..... cans/hour

( 100 **or** 200 **or** 300 **or** 500 )

(6) If ABCD is a parallelogram in which $\overline{AB} \perp \overline{BC}$ , then it is called .....

( square **or** rhombus **or** trapezium **or** rectangle )

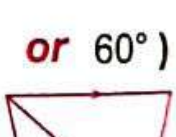
(7) 2 $m^3$ = ..... $dm^3$

( 2 **or** 20 **or** 200 **or** 2 000 )

(8) If the ratio among the measures of the angles of a triangle is 1 : 2 : 3 , then the measure of the smallest angle = .....

( 10° **or** 30° **or** 45° **or** 60° )

(9) **In the opposite figure :**



The number of trapezoids = .....

( 2 **or** 3 **or** 4 **or** 5 )

(10) If the height of a building is 20 m. , then its height on the picture = ..... cm. if the ratio of magnification = 1 : 100

( 10 **or** 15 **or** 20 **or** 25 )

(11) The following data are descriptive except the .....

( favourite food **or** social case **or** weight **or** birth place )

(12) If a merchant bought a TV set for L.E. 1 000 , then sold it for L.E. 1 200 , then the percentage of profit = ..... %

( 15 **or** 20 **or** 30 **or** 45 )

(13) If the perimeter of the base of cube = 36 cm. , then its volume = ..... $cm^3$

( 6 **or** 36 **or** 216 **or** 729 )

## 2 Complete the following :

(14) 8 hours : $\frac{1}{2}$ day = ..... : ..... (in the simplest form)

(15) The circumference of a circle = 2 × radius length × .....

(16) □○△ , □○△ , □○ ..... (in the same pattern)

(17) 75 % litre + 25 % $dm^3$ = ..... $dm^3$

(18) The two diagonals are perpendicular and equal in length in the .....

(19) If X , 5 , 4 and 10 are proportional numbers , then the value of X is .....

(20) The length of set = ..... ÷ the number of sets.

(21) If the sum of two numbers = 180 and the ratio between them is 2 : 7 , then the smallest number = .....

(22) The volume of a cuboid whose dimensions are 5 cm. , 3 cm. and 2 cm. = ..... $cm^3$

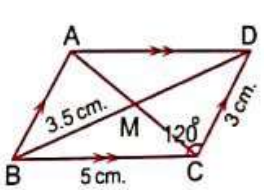
## 3 Answer the following :

(23) **In the opposite figure :**

ABCD is a parallelogram in which

m (∠ BCD) = 120° , CD = 3 cm. ,

BC = 5 cm. , BM = 3.5 cm.




Find : **[a]** m (∠ BAD) = .....

**[b]** The perimeter of the triangle DAB = .....

(24) A car covers 300 km. in 4 hours and another car covers 65 km. in 50 minutes , which of the two cars is faster ?

.....

.....

.....

(25) Nahed bought a computer for L.E. 4 500 and the discount was 10 % Calculate the original price of the computer before discount.

.....

.....

.....

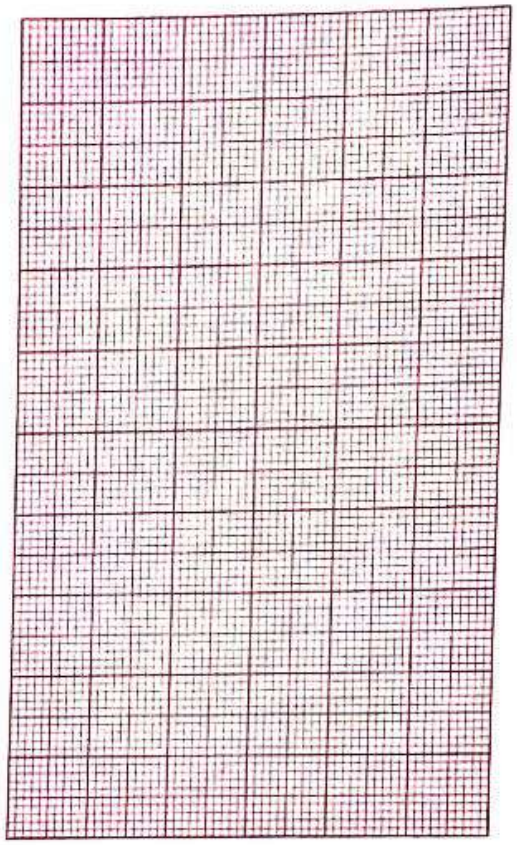
(26) **The following table shows the marks of 48 students in an English examination :**

| Marks | 0 – | 5 – | 10 – | 15 – | 20 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 4 | 8 | 18 | 12 | 6 | 48 |

[a] Draw the frequency curve for this distribution.

[b] How many students who record less than 10 marks ?

.....



## 12 Suez Governorate

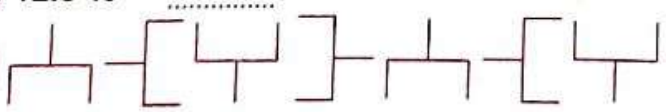
South Educational Directorate
Maths Inspection

**Answer the following questions :**

**1 Complete the following statements :**

( 1 ) If the drawing scale < 1 , this expresses .....

( 2 ) 12.5 % = $\frac{\text{.....}}{\text{.....}}$

( 3 )  ..... (in the same pattern)

( 4 ) 300 $mm^3$ = ..... $cm^3$

( 5 ) 16 kirat : 2 feddans = ..... : ..... (in the simplest form)

( 6 ) The number of sets = $\frac{\text{the range}}{\text{.....}}$

( 7 ) If A : B = 4 : 3 , B : C = 2 : 3 , then A : C = ..... : .....

( 8 ) The area of the base of the cuboid = $\frac{\text{.....}}{\text{.....}}$

( 9 ) A computer colour printer prints 12 papers each 4 minutes. The rate of work of this printer is .....

## 2 Choose the correct answer :

(1) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 **or** 18 **or** 20 **or** 22 )

(2) The figure XYZL in which XY = ZL , YZ = XL , XY ≠ YZ , the two diagonals are equal in length. The name of the figure is ..... ( rectangle **or** square **or** rhombus **or** cube )

(3) $\frac{432}{145}$ ..... $\frac{513}{614}$ ( > **or** < **or** = **or** ≤ )

(4) The diagonals are perpendicular in a ..... ( rectangle **or** square **or** parallelogram )

(5) If the real length is 5 m. and the drawing length is 5 cm. , then the drawing scale is ..... ( 1 : 10 **or** 1 : 1 000 **or** 1 : 100 **or** 1 : 1 )

(6) 0.625 = ..... % ( 625 **or** 6.25 **or** 62.5 **or** 6 500 )

(7) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals ..... ( 90° **or** 180° **or** 108° **or** 120° )

(8) 4 $m^3$ = ..... $dm^3$ ( 4 000 **or** 400 **or** 4 **or** 40 )

(9) The range of the set of values 50 , 25 , 35 , 20 is ..... ( 10 **or** 20 **or** 30 **or** 40 )

(10) If $\frac{x + 18}{9} = 8$ , then $x$ = ..... ( 54 **or** 72 **or** 45 **or** 27 )

(11) The ratio between the circumference of the circle and its diameter length = ..... (where : $\pi$ $\frac{22}{7}$) ( 7 : 22 **or** 13 : 4 **or** 22 : 7 **or** 4 : 13 )

(12) 1 ..... $\frac{4}{3}$ ( > **or** < **or** = **or** ≥ )

(13) The following data are descriptive data except ..... ( favorite colour **or** age **or** birth place **or** blood species )

## 3 Answer the following :

(1) In an English exam , Adel scored 13 marks from 20 marks , find the percentage of the scored mark of Adel in English.

.....

(2) The sum of lengths of all edges of a cube is 132 cm. Calculate its volume.

.....

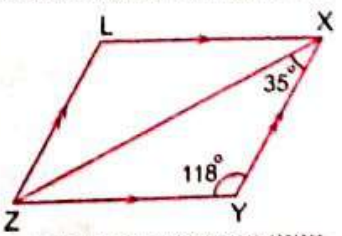
.....

(3) **In the opposite figure :**

XYZL is a parallelogram in which

m (∠ Y) = 118° , m (∠ YXZ) = 35°

Find : m (∠ L) , m (∠ LXZ)

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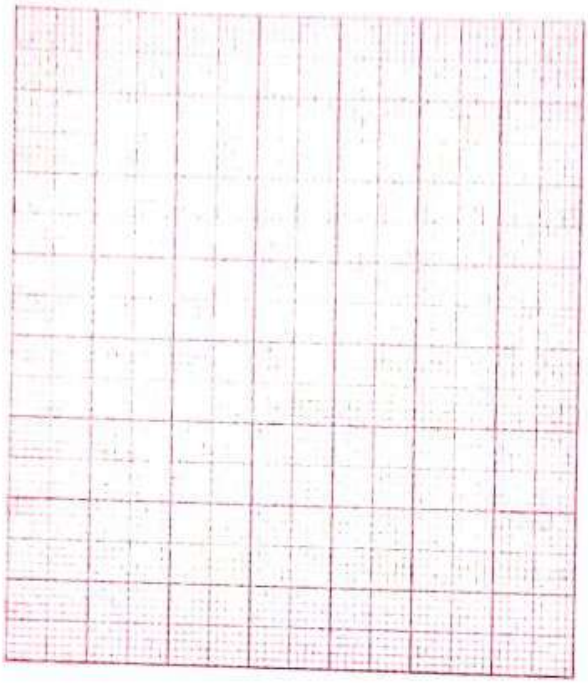
**( 4 ) The following table shows the marks of 100 students in math exam :**

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 10 | 100 |

Draw the frequency curve for this distribution.



## 13 Port Said Governorate

Maths Inspector

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** The range of the set of values : 7 , 3 , 6 , 9 and 5 is .....

( 2 **or** 4 **or** 6 **or** 12 )

**( 2 )** The centimetre cube is a unit of measuring the .....

( length **or** area **or** volume **or** weight )

**( 3 )** 18 kirats : 2 feddans = ..... ( 1 : 2 **or** 3 : 8 **or** 1 : 24 **or** 18 : 2 )

**( 4 )** A printer prints 15 papers in 3 minutes , then the rate of printing of this printer = ..... papers/minute ( 5 **or** 3 **or** 45 **or** 0.5 )

**( 5 )** If the drawing scale < 1 , this expresses .....

( equality **or** maximization **or** enlargement **or** minimization )

**( 6 )** The cube has ..... edges. ( 4 **or** 6 **or** 8 **or** 12 )

**( 7 )** The diagonals are perpendicular in .....

( rectangle **or** trapezoid **or** rhombus **or** parallelogram )

(8) The ratio between side length of the square to its perimeter is .....
( 1 : 2 **or** 1 : 3 **or** 4 : 1 **or** 1 : 4 )

(9) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measurement of the smallest angle is .....°
( 10 **or** 20 **or** 30 **or** 60 )

(10) The numbers 1 , 2 , 6 and ..... are proportional.
( 2 **or** 6 **or** 8 **or** 12 )

(11) If one angle of parallelogram is right , then it is called .....
( rectangle **or** trapezoid **or** rhombus **or** cube )

(12) The following data are descriptive data except .....
( age **or** birth place **or** blood species **or** favourite colour )

(13) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is .....
( 53 % **or** 65 % **or** 100 % **or** 135 % )

## 2 Complete the following :

(1) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

(2) The area of the triangle = $\frac{1}{2}$ × ..... × .....

(3) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

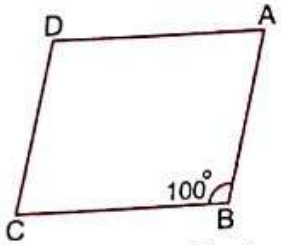
(4) $\frac{4}{5}$ = ..... %

(5) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

(6) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of the box = ..... $cm^3$

(7) If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = .....

(8) **In the opposite figure :**
ABCD is a parallelogram
, then m (∠ A) = .....°




(9) The following table shows the marks of 50 students in one month in maths :

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 15 | 20 | 10 | 50 |

Then the number of students whose marks are less than 40 is ..... students.

## 3 Answer the following :

( 1 ) A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

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.....

( 2 ) Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds. Calculate the share of each of them.

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( 3 ) Mariam bought a dress for 425 pounds with a discount 15 % Calculate the price of the dress before discount.

.....

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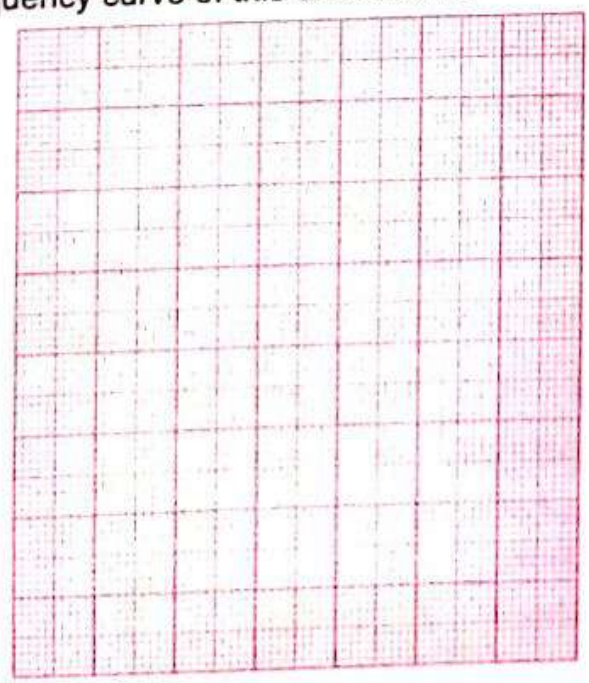
.....

( 4 ) **The following table shows the marks of 100 students in one month in maths test :**

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve of this distribution.



Answer the following questions :

**1 Choose the correct answer :**

(1) The antecedent of the ratio $\frac{3}{5}$ is ..... ( 5 or 3 or 8 or 15 )

(2) $\frac{3}{4}$ = ..... % ( 25 or 43 or 75 or 100 )

(3) When drawing a map of Suez Canal , then the drawing scale ..... 1

( > or < or ≥ or = )

(4) 4.63 litres = ..... $cm^3$ ( 463 or 0.463 or 46.3 or 4 630 )

(5) The range of set of values 7 , 4 , 6 , 9 , 5 is .....

( 4 or 5 or 7 or 6 )

(6) The ratio between $\frac{1}{2}$ kg. : 700 gm. = ..... : .....

( 5 : 7 or 5 : 0.7 or 0.5 : 7 or 1 : 5 )

(7) If the percentage of the number of girls in a class is 35 % , then the percentage of the number of boys in this class = ..... %

( 100 or 35 or 65 or 35 )

(8) A car covers 240 km. in 3 hours , then the speed of the car = ..... km./hr.

( 240 or 24 or 8 or 80 )

(9) Sara deposited 9 000 pounds in a bank with an interest 10 % , then the total amount after one year = ..... pound.

( 900 or 9 900 or 9 000 or 9 )

(10) A parallelogram in which one of its angle is right is called .....

( square or cube or rectangle or rhombus )

(11) If $\frac{A}{B} = \frac{C}{D}$ , which of the following is true ?

( $A + B = C + B$ or $A \times D = B \times C$ or $A - B = C - B$ or $A \times B = C \times D$ )

(12) The next shape in the description :  is .....

(  or ▽ or △ or ◯ )

(13) A cuboid of dimensions (9 , 3 , 7) cm. , then its volume = ..... $cm^3$

( 19 or 63 or 189 or 389 )

## 2 Complete :

(1) If 6 , 8 , 3 , $x$ are in proportion , then $x$ = .....

(2) If a : b = 4 : 3 , b : c = 2 : 3 , then a : c = ..... : .....

(3) If the real length is 6 metres and the length in the picture is 6 cm. , then the drawing scale = ..... : .....

(4) The percentage is a ratio of second term ..... symbolled by %

(5) The volume of a cube whose edge length 4 cm. = ..... $cm^3$.

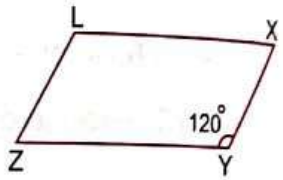
(6) The comparing between two quantities of different kind is .....

(7) The kind of statistical data are descriptive and .....

(8) **In the opposite figure :**

XYZL is a parallelogram in which m (∠ Y) = 120°

, then m (∠ Z) = .....°




(9) A wooden box in form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of box = ..... $cm^3$.

## 3 Answer the following :

(1) A contains has 12 litres of oil , it is wanted to put it in small bottles the capacity of each of them is 400 $cm^3$ , calculate the number of bottles which needed.

.....

.....

(2) If the ratio between child age and his father age is 2 : 13 , if the age of child is 6 years. Find his father's age.

.....

.....

(3) A tradesman bought a charge of apple with L.E. 20 000 , then he found that a part of charge was damaged so he sold the remains with L.E. 18 000 , find the percentage of his loss.

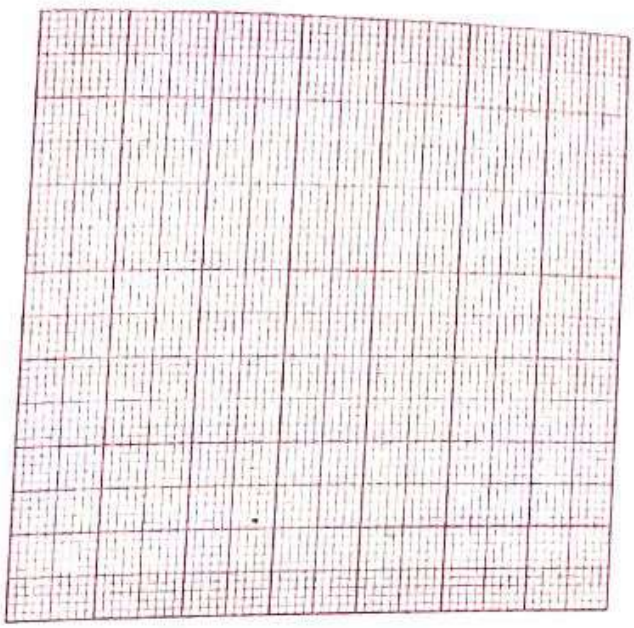
.....

.....

(4) **The following table shows ages of a gallery visitors during a day :**

| Age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number | 6 | 9 | 12 | 10 | 8 | 45 |

Draw the frequency curve of this distribution.



## 15 Kafr El-Sheikh Governorate — Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

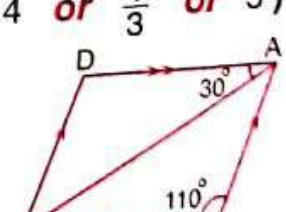
(1) The range of the set of values 50 , 25 , 35 , 20 is .....
( 20 or 30 or 40 or 50 )

(2) The ratio between $\frac{1}{2}$ and $\frac{3}{4}$ in the simplest form = .....
( $\frac{2}{3}$ or $\frac{3}{2}$ or $\frac{3}{8}$ or $\frac{8}{3}$ )

(3) 8 200 $mm^3$ = ..... $cm^3$ ( 82 or 0.82 or 8.2 or 8 200 000 )

(4) A computer colour printer prints 12 papers every 4 minutes , then its rate of work = ..... papers/minute. ( 12 or 4 or $\frac{1}{3}$ or 3 )

(5) **In the opposite figure :**
If ABCD is a parallelogram , then m (∠ ACD) = .....°




( 40 or 30 or 130 or 110 )

(6) 75 % = .....
( $\frac{4}{3}$ or $\frac{3}{4}$ or $\frac{1}{75}$ or $\frac{75}{10}$ )

(7) If two ratios are equal , then the product of extreams ..... the product of means.
( < or > or = )

(8) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale = .....
( 1 : 10 or 1 : 100 or 1 : 1 000 or 6 : 100 )

(9) The volume of a cuboid of dimensions 12 cm. , 10 cm. , 8 cm. ..... The volume of a cube of edge length 10 cm.
( < or > or = or ≥ )

(10) The following data are discriptive except .....

( favorite colour **or** age **or** birth place **or** blood type )

(11) If Adel scored 13 marks from 20 marks in an exam , then the percentage of the scored mark = ..... ( 65 % **or** 13 % **or** 20 % **or** 0.65 % )

(12) If the sum of faces areas of a cube is 54 $cm^2$ , then its volume = ..... $cm^3$

( 9 **or** $9 \times 9 \times 9$ **or** 3 **or** $3 \times 3 \times 3$ )

(13) If A : B = 4 : 3 and B : C = 2 : 3 , then A : C = .....

( 8 : 9 **or** 9 : 8 **or** 1 : 2 **or** 5 : 3 )

## 2 Complete each of the following :

(14) If one angle of the parallelogram is right angle , then it is called a .....

(15) 28 % + ..... % = 1

(16) 9.52 $dm^3$ = ..... litres.

(17) 250 gm. : $\frac{1}{2}$ kg. = ..... : ..... (in the simplest form)

(18) In a school , there are 560 students. If the number of girls = $\frac{3}{5}$ the number of boys , then the number of girls = ..... girls.

(19) The ratio between the side length of the equilateral triangle and its perimeter = ..... : .....

(20) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of the wood of the box = ..... $cm^3$

(21) An edifice of height 12 metres , its shade at a moment was 4 metres , a tree is neighboured to it and its shade is 2 m. at the same moment , then the height of the tree = ..... m.

(22) The following table shows the marks of 50 students in one test , then the number of students who got less than 40 marks = ..... students.

| **Sets** | 10 – | 20 – | 30 – | 40 – |
|---|---|---|---|---|
| **Number of students** | 5 | 15 | 20 | 10 |

## 3 Answer the following :

(23) A fruit seller bought a load of fruit for L.E. 2 000. After buying it he found a bad part , then he sold the remainder for L.E. 1 800 Find the percentage of his loss.

.....

.....

.....

(24) A cube shaped vessel , its internal edge length is 30 cm. , it is filled with oil.

[a] Calculate the capacity of oil in litres.

[b] If the price of one litre of oil is 9.5 pounds , calculate the price of all oil.

.....

.....

(25) If the ratio between the measures of angles of a triangle is 5 : 6 : 7 and the measure of the first angle is 50°

Find the measure of the other two angles.

.....

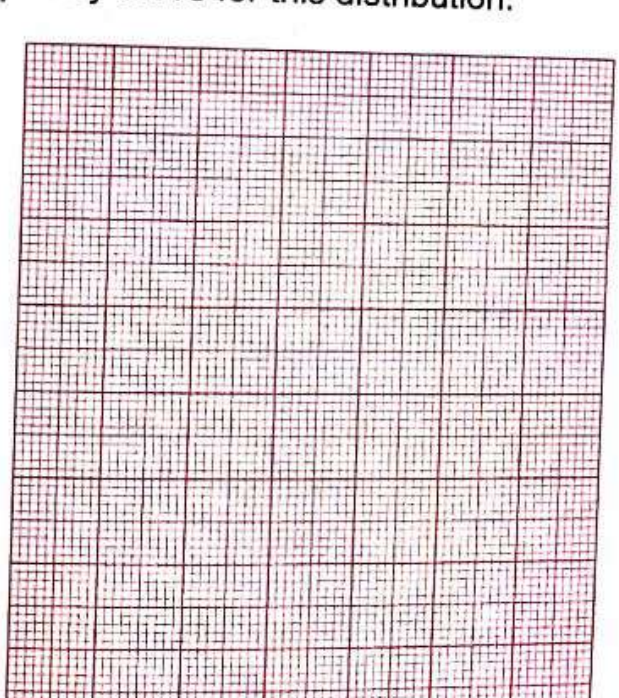
.....

.....

(26) **The following table shows the marks of 100 pupils in math test :**

| **Marks** | 10 – | 20 – | 30 – | 40 – | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve for this distribution.





**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ kg. ..... 700 gm. (< or > or = or ≥)

(2) If $\frac{5}{x} = \frac{10}{14}$ , then $x$ = ..... ( 10 **or** 14 **or** 2 **or** 7 )

(3) The cube has ..... edges. ( 10 **or** 12 **or** 8 **or** 11 )

(4) The diagonals are equal in length in .....
( parallelogram **or** rectangle **or** rhombus **or** trapezium )

(5) The following data are descriptive except .....
( colour **or** birth place **or** age **or** name )

(6) Volume of cuboid whose dimensions are 3 cm. , 2 cm. and 5 cm. = ..... $cm^3$. ( 30 **or** 9 **or** 25 **or** 60 )

(7) Range of set of values 7 , 3 , 6 , 9 and 5 = ..... ( 3 **or** 4 **or** 6 **or** 17 )

(8) $\frac{3}{4}$ = ..... % ( 34 **or** 75 **or** 57 **or** 0.53 )

(9) a : b = 3 : 4 , b : c = 3 : 5 , then a : c = ..... : ..... ( 9 : 20 **or** 2 : 3 **or** 3 : 5 **or** 3 : 2 )

(10) 3.6 litres = ..... $cm^3$. ( 3.6 **or** 3 600 **or** 360 **or** 0.36 )

(11) 1 – 70 % = ..... % ( 30 **or** 32 **or** 50 **or** 20 )

(12) $\frac{1}{4} : \frac{1}{3}$ = ..... : ..... ( 1 : 4 **or** 1 : 3 **or** 3 : 4 **or** 4 : 3 )

## 2 Complete :

(13) The ratio between side length of a square and its perimeter = ..... : .....

(14) 4 $m^3$. = ..... $dm^3$.

(15) If the edge length of a cube is 3 cm. , then its volume = ..... $cm^3$.

(16) 8 hr. : 3 days = ..... : ..... (in the simplest form).

(17) A tractor ploughs 28 feddans in 4 hr. , then the rate = ..... feddans/hr.

(18) The volume of cuboid 64 $cm^3$. and area of its base is 16 $cm^2$. , then its height = .....

(19) 30 % of 200 = .....

(20) If drawing length is 6 cm. and the real length is 6 m. , then the drawing scale = .....

## 3 Answer the following :

(21) If ratio between Hani and Maged weights is 5 : 6 and the difference between their weights is 10 kg. Find the weight of each of them.

.....

.....

.....

.....

.....

**(22)** Dina bought a mobile for 1 800 L.E. with a discount 10 % Calculate the price of the mobile before the discount.

.....

.....

.....

.....

.....

**(23)** A cube of metal its edge length is 12 cm. If it is wanted to be melted and converted into ingots form of cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that can be obtained.

.....

.....

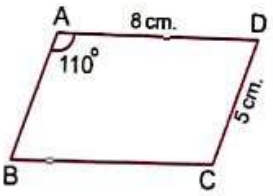
.....

**(24) In the opposite figure :**

ABCD is a parallelogram , then find :

**[a]** m (∠ C) = .....°

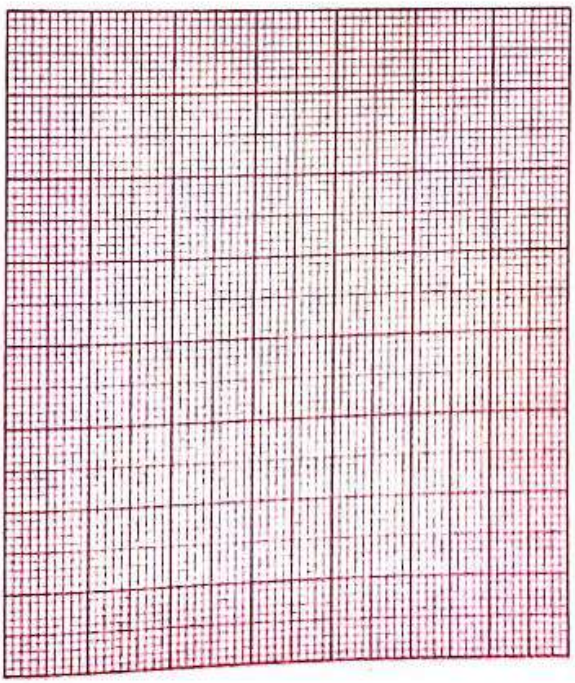
**[b]** The perimeter of ▱ ABCD = .....




**(25) The following table shows marks of 50 students in maths test :**

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| No. of students | 8 | 14 | 12 | 10 | 6 | 50 |

Draw the frequency curve of this distribution.



**Answer the following questions :**

**1 Choose the correct answer :**

(1) The side length of a square = 3 cm. , then the ratio between its side length and its perimeter equals ..... ( 4 or 3 or $\frac{1}{4}$ or $\frac{1}{3}$ )

(2) If the volume of a cube = 125 $cm^3$ , then its base area = .....

( 25 $cm^2$ or 25 cm. or 5 $cm^2$ or 5 cm. )

(3) If $\frac{2}{7} = \frac{x-3}{21}$ , then $x$ = ..... ( 6 or 9 or 12 or 3 )

(4) If Hoda bought a mobile phone for 900 pounds with a discount 10 % , then the price of the mobile phone before the discount is ..... pounds.

( 9 000 or 1 000 or 990 or 100 )

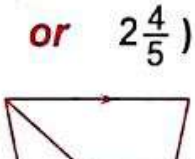
(5) The diagonals are perpendicular in a .....

( rectangle or trapezium or rhombus or parallelogram )

(6) $\frac{24}{5}$ = ..... ( $4\frac{1}{5}$ or $3\frac{2}{5}$ or $4\frac{4}{5}$ or $2\frac{4}{5}$ )

(7) **In the opposite figure :**

The number of trapezoids is .....



( 3 or 4 or 5 or 2 )

(8) If 100 grams from a food stuff gives 300 calories , how many calories will be given from 30 grams of this food ? ( 900 or 9 000 or 90 or 100 )

(9) If the sum of the edge lengths of a cube = 144 cm. , then its volume = .....

( 144 $cm^3$ or 1 728 cm. or 1 728 $cm^3$ or 144 $cm^2$ )

(10) 1 – (35 % + 25 %) = ..... ( $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$ )

(11) $\frac{513}{614}$ ..... $\frac{432}{145}$ ( < or > or = or ≥ )

(12) The ratio between 3 feddans : 24 kirats = .....

( 3 : 2 or 3 : 1 or 1 : 8 or 1 : 4 )

(13) The following data are descriptive except .....

( favorite colour or birth place or age or blood species )

**2 Complete each of the following :**

(1) 1.5 litres + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

(2) The capacity is the volume of the inner space for any .....

(3) If the drawing scale < 1 , then this expresses .....

(4) The rectangle is a parallelogram .....

(5) 900 $mm^3$ = ..... $cm^3$

(6) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = .....

(7) ..... is a cuboid with equal dimensions.

(8) The four sides are equal in length in each of ..... , .....

(9) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

## 3 Answer the following questions :

(1) A man died and left a piece of land for building its area is 17 kirats we recommended for building on orphan house on area equals 5 kirats , the remainder is distributed between his son and his daughter in the ratio 2 : 1 , calculate the share of each of them from the land.

.....

.....

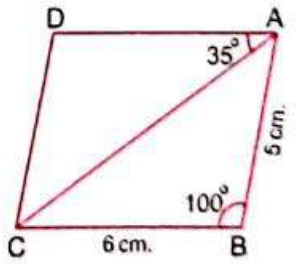
.....

(2) **In the opposite figure :**

ABCD is a parallelogram in which

AB = 5 cm. , BC = 6 cm. m (∠ B) = 100°

and m (∠ DAC) = 35° , without using measuring tools , find :




[a] m (∠ D) = .....°

[b] m (∠ ACD) = .....°

[c] The perimeter of the parallelogram ABCD = ..... cm.

(3) Heba bought a mobile phone for 2 185 pounds with a discount 5 % , calculate the price of the mobile phone before the discount.

.....

.....

.....

( 4 ) A restaurant owner prepares 80 food meals , all are of the same kind , using 20 kg. of meat , what is the rate of meat needed for preparing one meal , what is the rate of meat needed for preparing 4 meals ?

.....

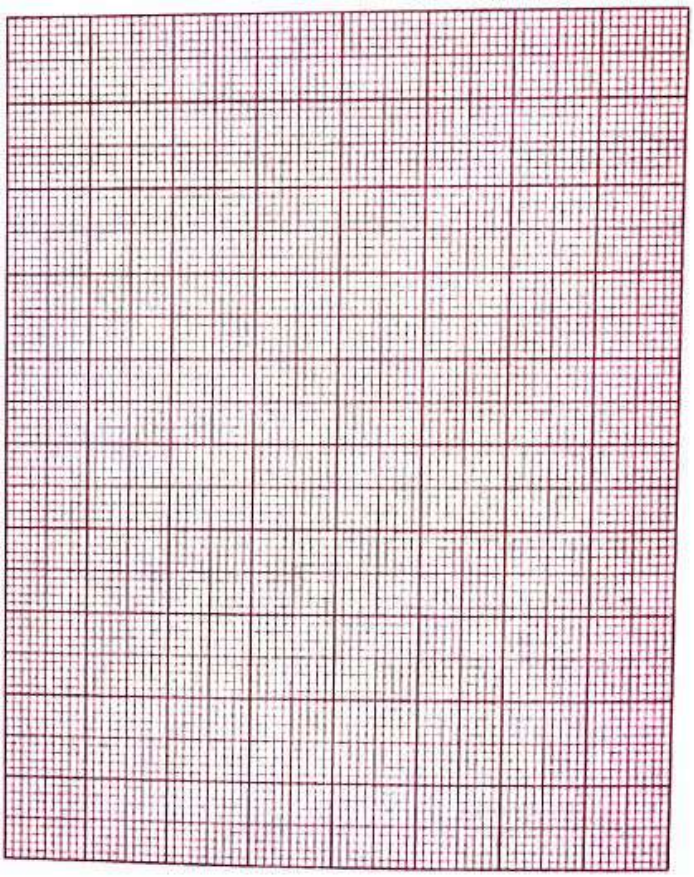
.....

.....

**( 5 ) The following table shows the number of hours which are spent by 60 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 9 | 13 | 18 | 12 | 8 | 60 |

Represent these data using the frequency curve.



## 18 Qena Governorate

Deshna Educational Zone
Math Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The following data are quantitative except .....

( age **or** weight **or** favorite colour **or** length )

(2) $\frac{1}{2}$ litre = ..... ( 75 mm. **or** 500 $cm^3$. **or** 7.5 $dm^3$. **or** 75 $m^3$. )

(3) The ratio between 18 months , 2 years is ..... : .....

( 1 : 9 **or** 3 : 4 **or** 10 : 9 **or** 27 : 30 )

(4) If one of the angles of the parallelogram is right and two adjacent sides are equal in length is called .....

( rhombus **or** square **or** triangle **or** rectangle )

(5) $\frac{17}{5}$ = ..... ( $4\frac{1}{5}$ **or** $4\frac{4}{5}$ **or** $3\frac{2}{5}$ **or** $2\frac{4}{5}$ )

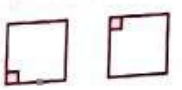
(6) The range of the values 50 , 90 , 35 and 20 is .....

( 10 **or** 20 **or** 30 **or** 70 )

## 2 Complete :

(1) The ratio between the side length of the square and its perimeter = ..... : .....

(2) 5 + 5 + 5 + 5 = 5 × .....

(3) The next figure in the following pattern  is .....

(4) If $\frac{3}{5} = \frac{15}{x}$ , then $x$ = .....

(5) The difference between the greatest value and the smallest value of the set of values is called .....

(6) The sum of any two consecutive angles in a parallelogram = .....°

## 3 Answer the following :

(1) Ahmed bought a car for L.E. 70 000 , if he wants to sell it with a profit 10 % Find the selling price.

.....

.....

.....

.....

(2) A container has 18 litres of honey. We need to distribute it on small bottles with each one of capacity 600 $cm^3$. Calculate the number of the needed bottles.

.....

.....

(3) The sum of edge lengths of a cube is 60 cm. Calculate the volume of the cube.

.....

.....

(4) A map is drawn for some cities with drawing scale 1 : 400 000 , if the real distance between two cities is 20 km. , find the distance on the map.

.....

.....

.....

.....

(5) In a primary school , the total number of the pupils is 350 pupils. If the ratio between the number of boys and the number of girls is 2 : 3 , then calculate the number of boys and girls.

.....

.....

.....

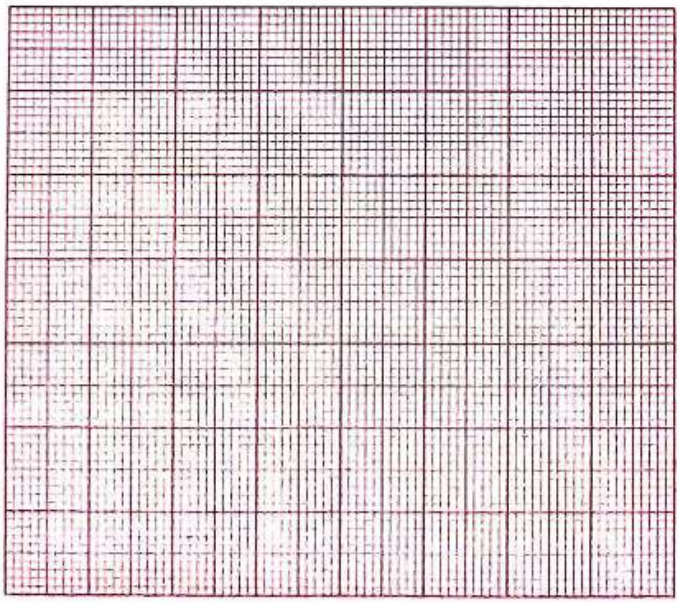
(6) **The following table shows the extra money which 100 workers got in a month in a factory , they are follow :**

| **The extra money** | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – | **Total** |
|---|---|---|---|---|---|---|---|
| **Number of workers** | 20 | 10 | 30 | 25 | 10 | 5 | **100** |

**[a]** What is the number of workers who obtained extra money less than 60 pounds ?

.....

**[b]** Draw the frequency polygon of this distribution ?



# 19 Luxor Governorate

Armont Educational Zone
Math Supervision

**Answer the following questions :**

## 1 Complete :

(1) The range of the set of values = the maximum value – .....

(2) The volume of the cuboid = ..... × .....

(3) 15 $dm^3$ = ..... $cm^3$

(4) The two diagonals are perpendicular in each of ..... and .....

(5) The ratio between two numbers 125 : 25 = ..... : .....

(6) 2.5 feddans : 18 kirats = ..... : ..... (in the simplest form) (in the simplest form)

(7) 0.4 = ..... %

(8) If A : B = 5 : 9 , B : C = 9 : 11 , then A : C = ..... : .....

(9) The drawing scale = $\frac{\text{.....}}{\text{.....}}$

## 2 Choose the correct answer :

(1) The four sides are equal in length in .....

( triangle **or** rhombus **or** parallelogram **or** trapezium )

(2) 2.5 : 5.75 = ..... : .....

( 10 : 13 **or** 23 : 10 **or** 25 : 575 **or** 10 : 23 )

(3) The volume of a cuboid is 81 $cm^3$ and the area of its base is 27 $cm^2$ , then its height = ..... ( 24 cm. **or** 3 cm. **or** 2 cm. **or** 4 cm. )

(4) The ratio between the perimeter of the square and its side length = ..... : ..... ( 1 : 2 **or** 1 : 3 **or** 4 : 1 **or** 2 : 1 )

(5) The ratio between the child's age and his father's age = 2 : 15 , if the child's age is 6 years , then his father's age = ..... years.

( 45 **or** 30 **or** 39 **or** 53 )

(6) 46 $dm^3$ = ..... litres.

( 46 000 **or** 0.064 **or** 46 **or** 6 400 000 )

(7) Hassan spends L.E. 70 within a week , then the rate of what Hassan spends daily = .....

( 15 L.E./day **or** 10 L.E./day **or** 5 L.E./day **or** 7.5 L.E./day )

(8) The sum of edge lengths of a cube = 48 cm. , then its volume = ..... $cm^3$

( 26 **or** 216 **or** 729 **or** 64 )

(9) The following data are descriptive data except .....
( age or blood specie or favorite food or birth place )

(10) If the numbers 4 , $x$ , 12 , 18 are proportional , then $x$ = .....
( 2 or 3 or 4 or 6 )

(11) If the drawing scale ..... 1 , this expresses maximization.
( > or = or < )

(12) Ahmed bought a car for L.E. 50 000 and sold it by profit 10 % , then the selling price = L.E. .....
( 45 000 or 55 000 or 75 000 or 2 000 )

(13) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
( 4 or 5 or 6 or 7 )

## 3 Answer the following :

(1) If the drawing scale of a map is 1 : 1 500 000 , and the distance between two cities on this map = 3 cm. , find the real distance between them in km.

.....

.....

.....

.....

(2) Three persons started in business. The first paid L.E. 1 500 , the second paid L.E. 2 500 and the third paid L.E. 2 000 , at the end of the year the net profit = L.E. 6 000 Calculate the share of each one of them.

.....

.....

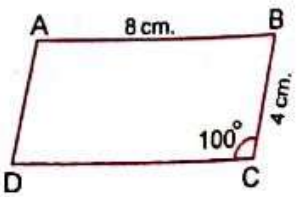
.....

.....

(3) **In the opposite figure :**

ABCD is a parallelogram in which AB = 8 cm. , BC = 4 cm. , m (∠ C) = 100°

Find :



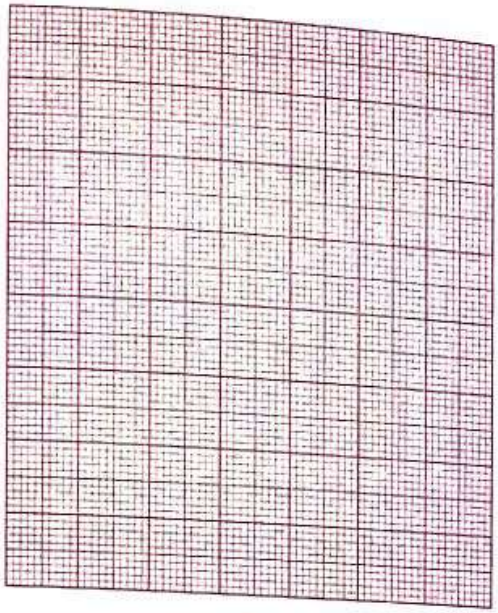

[a] m (∠ ADC) = .....

[b] The perimeter of the parallelogram ABCD = .....

(4) **The following table shows the number of the hours which spent by 20 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 1 | 6 | 3 | 7 | 3 | 20 |

Represent this data by using the frequency curve.



## 20 Aswan Governorate

Education Administration
El-Salam Primary School

**Answer the following questions :**

**1 Choose the correct answer :**

(1) The ratio between the length of the side of the equilateral triangle and its perimeter = ..... ( 1 : 1 **or** 1 : 3 **or** 1 : 4 **or** 1 : π )

(2) Hassan spends L.E. 45 within three days , then rate = ..... L.E./day
( 12 **or** 13 **or** 14 **or** 15 )

(3) If the drawing scale > 1 , this expresses .....
( minimization **or** enlargement **or** equality **or** congruent )

(4) In one of the classes the number of boys is 15 and the number of girls is 20 pupils , then the ratio between number of boys and the number of girls = ..... : ..... ( 1 : 4 **or** 1 : 2 **or** 1 : 3 **or** 3 : 4 )

(5) The volume of a cube of edge length 2 cm. = ..... $cm^3$.
( 8 **or** 16 **or** 34 **or** 60 )

(6) 3 litres = ..... $cm^3$. ( 3 **or** 300 **or** 3 000 **or** 9 000 )

(7) 75 % = ..... ( $\frac{1}{4}$ **or** $\frac{1}{2}$ **or** $\frac{3}{4}$ **or** $\frac{5}{3}$ )

(8) If $\frac{2}{3} = \frac{10}{x}$ , then $x$ = ..... ( 6 **or** 15 **or** 20 **or** 25 )

(9) If one of the angles of a parallelogram is right , then its called .....
( rectangle **or** rhombus **or** square **or** cube )

(10) 0.35 = ..... % ( 35 **or** 3.5 **or** 0.35 **or** 0.37 )

(11) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 10 **or** 1 : 100 **or** 1 : 500 **or** 1 : 1 000 )

(12) The following data are descriptive data except ..... ( favourite colours **or** age **or** name **or** blood species )

(13) If the shirt with price L.E. 120 at 20 % discount , then the value of discount = L.E. ..... ( 15 **or** 24 **or** 30 **or** 40 )

## 2 Complete the following :

( 1 ) A company for selling electric sets , it shows a TV set for L.E. 2 100 , if the percentage of the profit is 12 % , then the buying price of the TV set = .....

( 2 ) In the following table :

| Sets | 10 – | 20 – | 30 – |
|---|---|---|---|
| Frequency | 4 | 6 | 2 |

The centre of the set (10 –) = .....

( 3 ) There are 560 students , if the ratio between numbers of girls to the number of boys is 3 : 5 , then the number of girls = ..... girls.

( 4 ) The ratio between $\frac{1}{2} : \frac{3}{5}$ = .....

( 5 ) 0.6 = ..... %

( 6 ) ○△□○△□ ..... (in the same pattern)

( 7 ) If the numbers 6 , 8 , 3 , $x$ are proportional , then the value of $x$ = .....

( 8 ) A cuboid of base area is 16 $cm^2$ and its height is 5 cm. , then the volume = ..... $cm^3$

( 9 ) The range of the set of values 50 , 25 , 35 , 20 = .....

## 3 Answer the following questions :

( 1 ) Khaled bought a flat for L.E. 150 000 , he sold it at 5 % loss. Calculate the selling price.

.....

.....

.....

.....

.....

(2) A triangular piece of land the ratio between lengths of its sides 4 : 6 : 7 , if the perimeter of this piece of land is 51 metres.
Find the lengths of sides of piece of land.

.....

.....

.....

.....

.....

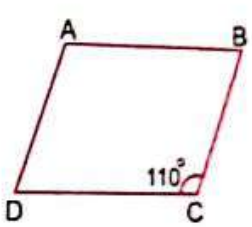
(3) **In the opposite figure :**

ABCD is a parallelogram in which

m (∠ C) = 110°

Find : **[a]** m (∠ A) = .....°

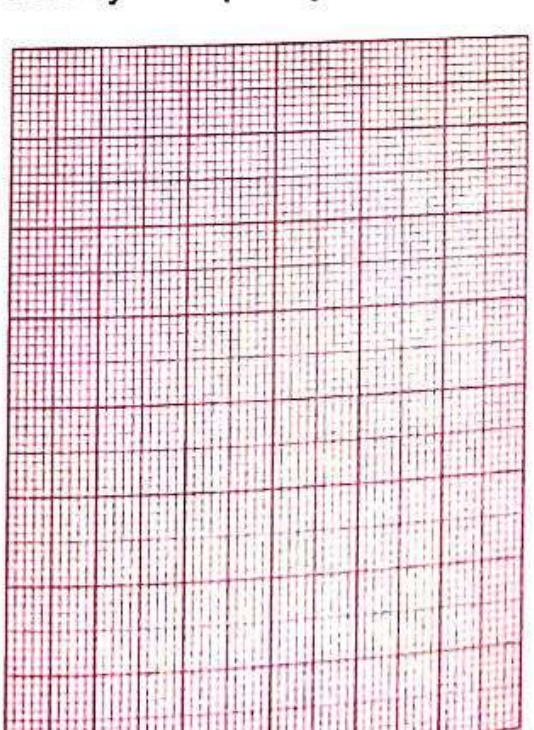
**[b]** m (∠ B) = .....°




(4) **The following table shows the marks of 100 students in maths exam :**

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 |
|---|---|---|---|---|
| **Number of students** | 15 | 30 | 40 | 15 |

Represent these data by a frequency curve.



# FINAL EXAMINATIONS

- *Model Examinations of the School Book (2 models + model for the special needs students)*
- *20 Examinations from Some Governorates for the Year 2020*
- *25 Examinations from Some Governorates for the Year 2017*
- *5 Examinations from Some Governorates for the Year 2016*

# Model Examinations of the School Book

## Model 1

***Answer the following questions :***

**1** ***Complete the following statements :***

( 1 ) 1.5 litre + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

( 2 ) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

( 3 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = .....

( 4 ) The area of the triangle = $\frac{1}{2}$ × ..... × .....

---

**2** ***Choose the correct answer :***

( 1 ) The range of the set of values : 7 , 3 , 6 , 9 and 5 is .....

( 2 or 4 or 6 or 12 )

( 2 ) $\frac{3}{4}$ = ..... (in decimal form) ( 0.2 or 0.5 or 0.25 or 0.75 )

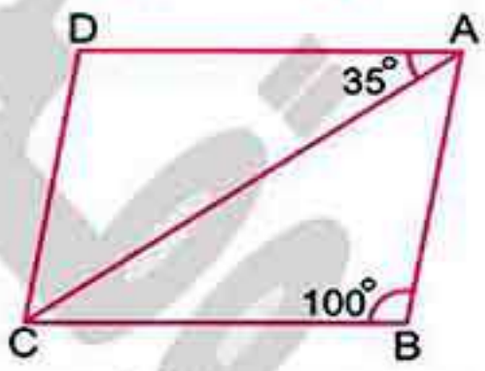
( 3 ) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is ..... hours.

( 4 or 6 or 7 or 8 )

( 4 ) **In the opposite figure :**

ABCD is a parallelogram. , then

m (∠ ACD) = .....°




( 35 or 45 or 100 or 180 )

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**3** **[a]** A container has 12 litres of oil , it is wanted to put them in smaller bottles the capacity of each of them is 400 $cm^3$. Calculate the number of bottles which are needed.

**[b]** If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

**4** **[a]** The ratio among the measures of the angles of a triangle is 2 : 3 : 4 Find the measure of each angle in this triangle.

**[b]** A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

**5** **[a]** Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year , the net profit was L.E. 3 900 Calculate the share of each of them from the profit.

**[b]** ***The following table shows the marks of 100 students in one month in math test :***

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

Draw the frequency curve of this distribution.

## Model 2

***Answer the following questions :***

**1** ***Choose the correct answer :***

( 1 ) If one angle of a parallelogram is right , then it is called a .....

( rectangle *or* square *or* rhombus *or* cube )

( 2 ) $\frac{24}{5}$ = ..... ( $4\frac{1}{5}$ *or* $3\frac{2}{5}$ *or* $4\frac{4}{5}$ *or* $2\frac{4}{5}$ )

( 3 ) If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 , then the range of these marks = ..... ( 32 *or* 33 *or* 28 *or* 86 )

( 4 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 *or* 18 *or* 20 *or* 22 )

**2** ***Complete the following statements :***

( 1 ) 65 $dm^3$ = ..... litres.

( 2 ) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of the box = ..... $cm^3$

Final Examinations

( 3 ) The following table shows the marks of 50 students in one month in math :

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 15 | 20 | 10 | 50 |

then the number of students whose marks are less than 40 is ..... students.

( 4 ) If the height of the fence of the villa in the design is 5 cm. and its real height is 6 metres , then the drawing scale is ..... : .....

---

**3** **[a]** Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds.
Calculate the share of each of them.

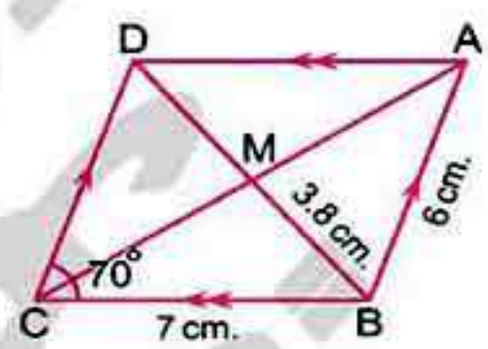
**[b]** 10 litres of water were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the water in the vessel.

---

**4** **[a]** In one of our schools , there are 360 students , if the ratio between the number of boys and the number of girls is 1 : 2
Find each of the number of boys and girls.

**[b]** ***In the opposite figure :***

ABCD is a parallelogram in which AB = 6 cm. , BC = 7 cm. , BM = 3.8 cm. , m (∠ C) = 70°
Without using geometrical instruments.
Find : m (∠ ADC) , the perimeter of Δ BCD

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**5** **[a]** Heba bought a mobile phone for 660 pounds with a discount 15 %
Calculate the price of the mobile phone before the discount.

**[b]** The following table shows the number of hours which are spent by 40 pupils to study their lesson daily :

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 12 | 11 | 40 |

Represent these data by the frequency curve.

## Model for the special needs students

***Answer the following questions :***

**1** ***Complete the following statements :***

( 1 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

( 2 ) $\frac{3}{10}$ = ..... %

( 3 ) The volume of a cuboid = the area of base × .....

( 4 ) 3 litres = ..... $cm^3$.

---

**2** ***Choose the correct answer :***

( 1 ) The range of the values 50 , 25 , 35 and 20 is .....

( 10 *or* 20 *or* 30 )

( 2 ) If $\frac{2}{3} = \frac{10}{x}$ , then $x$ = .....

( 6 *or* 15 *or* 20 )

( 3 ) The diagonals are perpendicular in .....

( rectangle *or* square *or* parallelogram )

( 4 ) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is .....

( 1 : 10 *or* 1 : 1 000 *or* 1 : 100 )

---

**3** ***Choose from column (A) to the suitable one from column (B) :***

| A | B |
|---|---|
| (1) The cube has ..... edges. | minimization |
| (2) If the drawing scale < 1 , this expresses ..... | 12 |
| (3) The ratio between the side length of the square and its perimeter = ..... | 90° |
| (4) All of angles of the rectangle are equal in measure and the measure each of any of them = ..... | 1 : 4 |

Final Examinations

**4** ***Put true (✔) or false (✘) :***

( 1 ) The numbers 1 , 2 , 6 and 12 are proportional. ( )

( 2 ) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is 20 % ( )

( 3 ) The favorite colour is a descriptive data. ( )

( 4 ) The volume of a cube of edge length 3 cm. = 9 $cm^2$ ( )

---

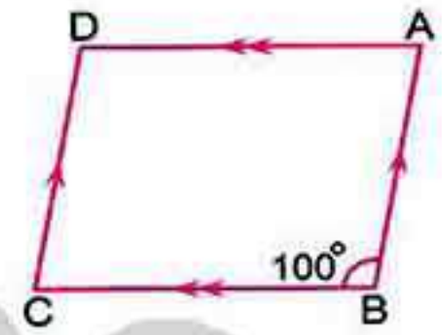
**5** **[a]** ***Complete the following statements :***

( 1 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

( 2 ) **In the opposite figure :**

ABCD is a parallelogram , then

m (∠ D) = .....°




**[b]** ***The following table shows the marks of 50 students in one month in maths :***

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 6 | 10 | 20 | 14 | **50** |

Complete :

( 1 ) The number of students whose marks are less than 20

= ..... students.

( 2 ) The number of students whose marks are 40 or more

= ..... students.

# Some School's Examinations from Different Governorats 2020

## 1 Cairo Governorate

Nasr City Edu. Administration
St. George's College

القاهرة

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) If the ratio among the measurements of the angles of the triangle is 3 : 4 : 5 , then the measure of the greatest angle = .....
( 90° **or** 75° **or** 60° **or** 55° )

( 2 ) 16 : 48 = ..... : ..... ( 1 : 2 **or** 1 : 4 **or** 1 : 5 **or** 1 : 3 )

( 3 ) 5.7 litres = ..... $cm^3$ ( 5.7 **or** 570 **or** 5 700 **or** 57 )

( 4 ) 3 , 4 , $x$ and 12 are proportional quantities , then $x$ = .....
( 9 **or** 5 **or** 7 **or** 8 )

( 5 ) The two diagonals are equal in length and perpendicular in .....
( parallelogram **or** square **or** rectangle **or** rhombus )

( 6 ) $\frac{2}{5}$ = ..... % ( 20 **or** 30 **or** 40 **or** 50 )

( 7 ) The range of the values 7 , 3 , 6 , 9 and 1 is .....
( 8 **or** 1 **or** 7 **or** 0 )

( 8 ) $\frac{1}{2}$ kg. : 700 gm. = ..... : ..... ( 2 : 7 **or** 7 : 8 **or** 5 : 7 **or** 7 : 9 )

( 9 ) If the drawing length of an object is 2 cm. and the real length is 20 m. , then the drawing scale is = .....
( 1 : 10 **or** 1 : 100 **or** 1 : 1 000 **or** 1 : 10 000 )

(10) If the volume of a cube = 0.125 $cm^3$ , then its edge length = ..... cm.
( 25 **or** 0.25 **or** 0.5 **or** 5 )

(11) Ahmed drinks 21 glasses of milk weekly , then he drinks ..... glasses of milk everyday.
( 3 **or** 9 **or** 6 **or** 12 )

(12) From the quantitative data is .....
( favorite colour **or** name **or** age **or** blood type )

(13) The ratio between the perimeter of an equilateral triangle and its side length = .....
( 1 : 3 **or** 2 : 3 **or** 3 : 1 **or** 3 : 2 )

(14) $\frac{1}{4}$ : $\frac{1}{3}$ = .....
( 1 : 4 **or** 1 : 3 **or** 3 : 4 **or** 4 : 3 )

**2 Complete each of the following :**

( 1 ) If the lower limit of the set = 10 and the upper limit = 30 , then the centre = .....

( 2 ) If A : B = 1 : 2 and B : C = 3 : 5 , then A : C = ..... : .....

( 3 ) If the drawing length < 1 , this express .....

( 4 ) 3 weeks : 24 days = ..... : ..... (in the simplest form)

( 5 ) 1 – (37 % + 41 %) = .....

( 6 ) The ratio between two numbers is 7 : 12 , if their sum is 76 , then the greater number = .....

( 7 ) A cuboid is of dimensions 8 cm. , 6 cm. and 10 cm. , then its volume is ..... $cm^3$.

( 8 ) If the perimeter of one face of a cube is 24 cm. , then its volume is ..... $cm^3$.

**3 Answer the following questions :**

( 1 ) Khaled bought a flat for L.E. 150 000 After selling it , he found that the percentage of his loss was 5 % Calculate the selling price of the flat.

.....

.....

.....

.....

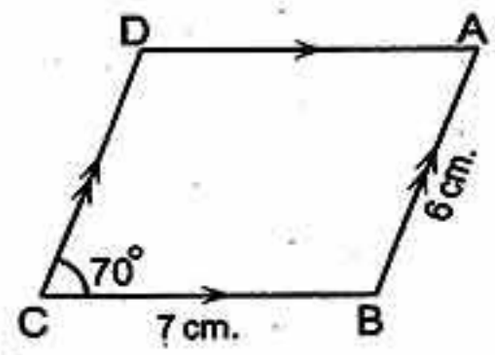
( 2 ) A cube , the perimeter of its base is 40 cm. Calculate its volume.

.....

.....

( 3 ) **In the opposite figure :**

ABCD is a parallelogram ,
in which m (∠ BCD) = 70° ,
AB = 6 cm. and BC = 7 cm.
Find : **[a]** m (∠ D)
**[b]** The length of each of $\overline{CD}$ and $\overline{AD}$



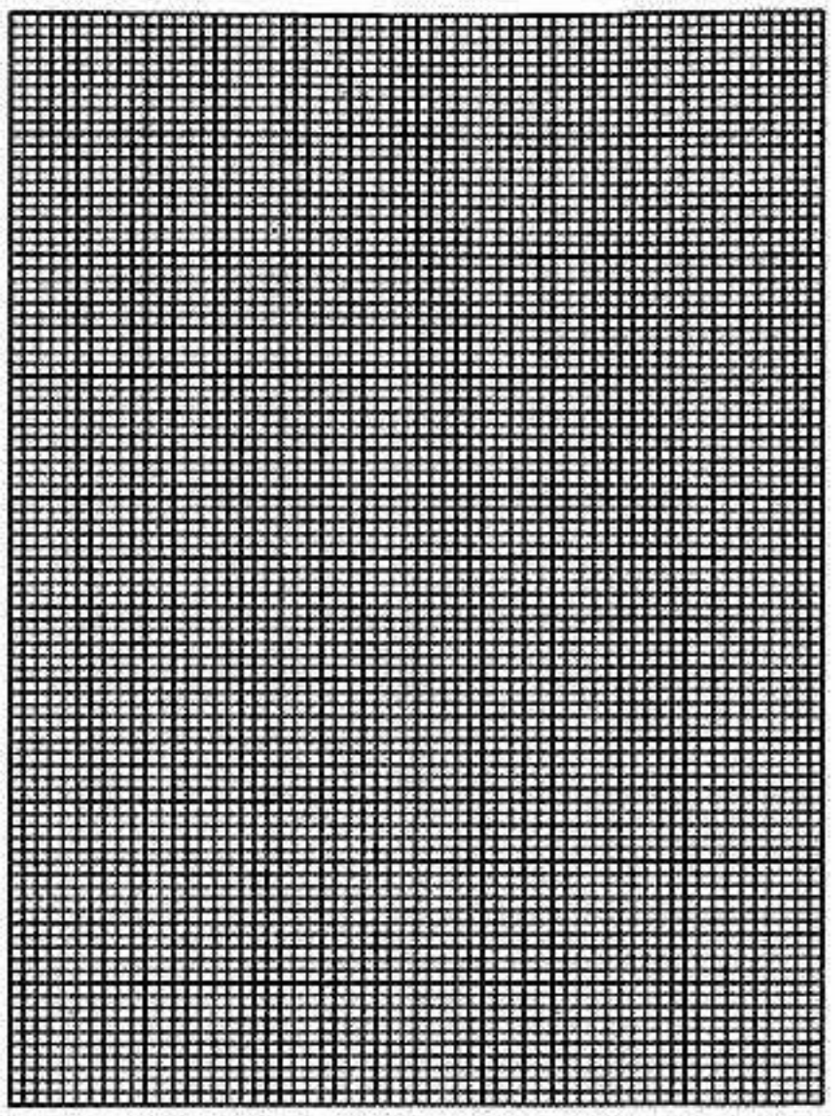

.....

( 4 ) **The following table shows the number of hours , which are spent by 60 pupils :**

| Number of hours | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 9 | 13 | 18 | 12 | 8 | 60 |

Represent this distribution by a frequency curve.

Final Examinations



## 2 Cairo Governorate

Maadi Educational Zone
Victory College Maadi

القاهرة

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) If A : B = 2 : 3 and B : C = 3 : 5 , then A : C = ..... : .....
( 3 : 2 **or** 5 : 2 **or** 4 : 5 **or** 2 : 5 )

( 2 ) The following data are descriptive data except .....
( favorite colour **or** age **or** name **or** birth place )

( 3 ) 8 000 gm. : 5 kg. = ..... : ..... ( 4 : 5 **or** 5 : 8 **or** 2 : 3 **or** 8 : 5 )

( 4 ) If one angle of a parallelogram is right , then its called .....
( rectangle **or** rhombus **or** square **or** cube )

( 5 ) The cuboid has ..... faces. ( 6 **or** 4 **or** 12 **or** 8 )

( 6 ) 1.75 = ..... % ( 75 **or** 0.175 **or** 175 **or** 17.5 )

**2 Complete :**

( 1 ) If the drawing scale > 1 , this expresses .....

( 2 ) Mona deposit L.E. 9 000 in a bank with interest 11 % per year , the amount of sum after one year = L.E. .....

Final Examinations

( 3 ) If Hazem studies 21 hours weekly , then the rate = ..... hours/day

( 4 ) The ratio between two numbers = $\frac{\text{.....}}{\text{.....}}$

**3 Choose the correct answer :**

( 1 ) 5.6 $dm^3$ = ..... litres. ( 5600 **or** 560 **or** 5.6 **or** 56 )

( 2 ) The ratio between the side length of an equilateral triangle and its perimeter is ..... ( 1 : 3 **or** 1 : 4 **or** 1 : 1 **or** 3 : 1 )

( 3 ) The ..... is a ratio with second term is 100

( proportion **or** percentage **or** rate **or** drawing scale )

( 4 ) The ratio between a child's age to his father's age is 2 : 9 , if the child's age is 8 years , then his father's age is ..... years. ( 63 **or** 13 **or** 36 **or** 18 )

( 5 ) If $\frac{2}{3} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 **or** 20 **or** 18 **or** 36 )

( 6 ) A primary school has 540 pupils , if the ratio between the number of boys and the number of girls is 4 : 5 , then the number of boys is .....

( 300 **or** 240 **or** 352 **or** 675 )

**4 Complete each of the following :**

( 1 ) If the length of an insect in the picture is 10 cm. and its real length is 2 mm. , then the drawing scale = ..... : .....

( 2 ) In the parallelogram , the sum of the measures of any two consecutive angles is ..... °

( 3 ) The range of the 7 , 3 , 6 , 9 and 5 is .....

( 4 ) The sum of lengths of all edges of a cube is 132 cm. , then its volume is ..... $cm^3$

**5 Answer the following :**

( 1 ) Three persons participated in a commerce , the first paid L.E. 1 500 , the second paid L.E. 2 000 and the third paid L.E. 2 500 , at the end of the year the loss is L.E. 1 200

Find the share of each of them from loss.

.....

.....

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Final Examinations

( 2 ) 10 litres of water were poured in a vessal in the shape of a cuboid , its base is square of side length is 25 cm.
Find the height of the water in the vessel.

.....

.....

( 3 ) The perimeter of a rectangle is 140 cm. and the ratio between its dimensions is 3 : 4 Find its area.

.....

.....

.....

( 4 ) Which is greater in volume , a cuboid whose dimensions are 12 cm. , 10 cm. and 8 cm. or a cube of edge length 10 cm. ?

.....

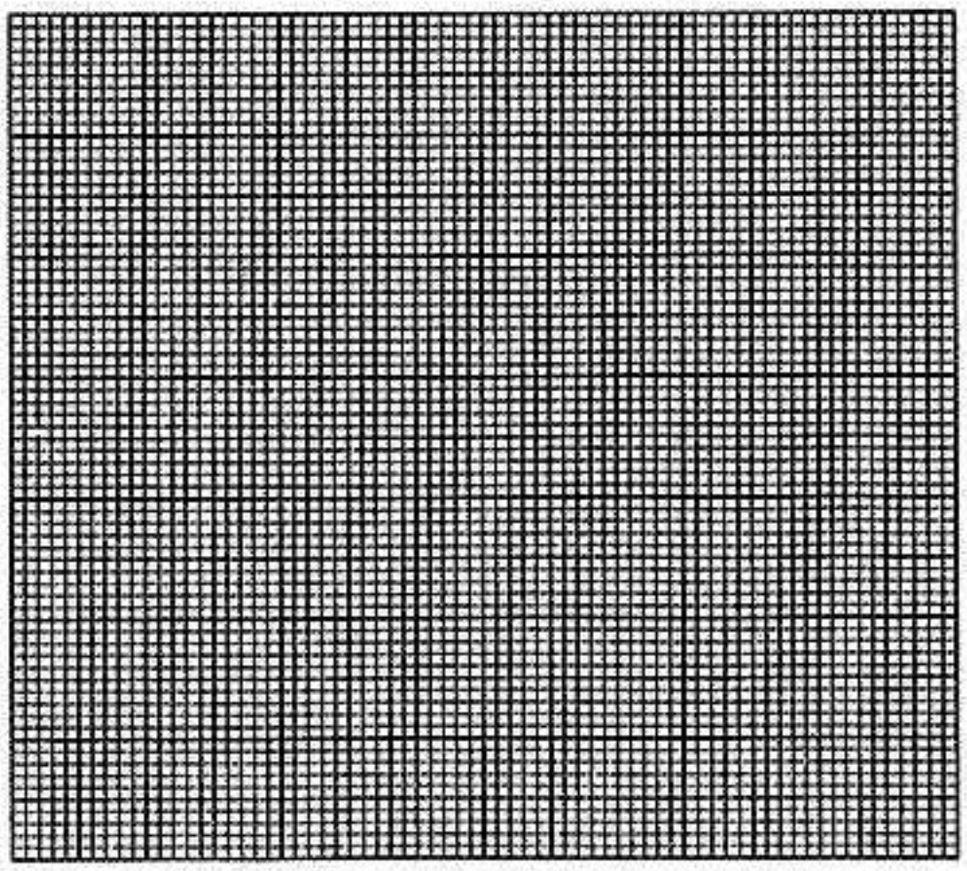
.....

.....

( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 12 | 11 | 40 |

Represent these data using the frequency curve.



Final Examinations

## 3 Giza Governorate

Omrania Educational Zone
El-Shahid (M.M.A) Exp. Lang. Sch.

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The volume of a cube equals 125 $cm^3$ , then the area of its base = .....
( 5 $cm^2$ **or** 25 $cm^2$ **or** 125 $cm^2$ **or** 100 $cm^2$ )

( 2 ) $\frac{2}{5}$ = ..... % ( 20 **or** 30 **or** 40 **or** 50 )

( 3 ) If a : b = 3 : 5 and b : c = 5 : 7 , then a : c = .....
( 2 : 3 **or** 3 : 4 **or** 3 : 7 **or** 8 : 7 )

( 4 ) 1 – 25 % = ..... ( $\frac{3}{4}$ **or** $\frac{1}{4}$ **or** $\frac{1}{8}$ **or** $\frac{3}{8}$ )

( 5 ) If the numbers 3 , 5 , $x$ and 20 are proportional , then $x$ + 3 = .....
( 6 **or** 12 **or** 15 **or** 21 )

( 6 ) If the drawing length is 6 cm. , and the real length is 6 metres , then the drawing scale = ..... ( 1 : 10 **or** 1 : 100 **or** 1 : 1000 **or** 1 : 1 )

**2 Choose the correct answer :**

( 1 ) $\frac{3}{4}$ litre = ..... mL. ( 0.75 **or** 7.5 **or** 750 **or** 75 )

( 2 ) The two diagonals are perpendicular in .....
( rectangle **or** rhombus **or** triangle **or** parallelogram )

( 3 ) The range of the values 7 , 3 , 6 , 9 and 1 is .....
( 8 **or** 1 **or** 7 **or** 0 )

( 4 ) The ratio between Aya's age and Eman's age is 1 : 6 , if Aya's age is 6 years old , then Eman's age is ..... years old. ( 32 **or** 36 **or** 39 **or** 42 )

( 5 ) If 45% of $x$ = 90 , then $x$ = ..... ( 20 **or** 100 **or** 200 **or** 300 )

( 6 ) The ratio between 15 hours and one day in the simplest form = .....
( 1 : 15 **or** 15 : 1 **or** 8 : 5 **or** 5 : 8 )

**3 Complete :**

( 1 ) The number of axes of symmetry of a parallelogram is .....

( 2 ) The two diagonals are equal in length and perpendicular in .....

( 3 ) The difference between the maximum value and the minimum value is called .....

( 4 ) 12 : 18 : 36 = ..... : ..... : ..... (in the simplest form).

Final Examinations

( 5 ) A rate is .....

( 6 ) 30 months : 3 years = ..... : ..... (in the simplest form).

( 7 ) If 2 , $x$ , 8 and 20 are proportional , then $x$ = .....

( 8 ) The drawing scale = $\frac{\text{.....}}{\text{.....}}$

## 4 Answer the following :

( 1 ) Find the cost price of goods sold for 21 275 pounds with profit percentage 15 %

.....

.....

.....

( 2 ) A photo was taken for an insect by enlargement ratio 100 : 1 , if the real length is 0.8 cm. Find the length in the picture.

.....

.....

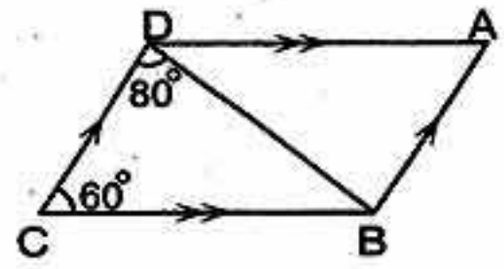
.....

( 3 ) **In the opposite figure :**

ABCD is a parallelogram.

Find : **[a]** m (∠ ADB)

**[b]** m (∠ A)

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.....

( 4 ) Which is greater in volume, a cube of edge length 5 cm. or a cuboid of dimensions 3 cm. , 5 cm. and 7 cm. ?

.....

.....

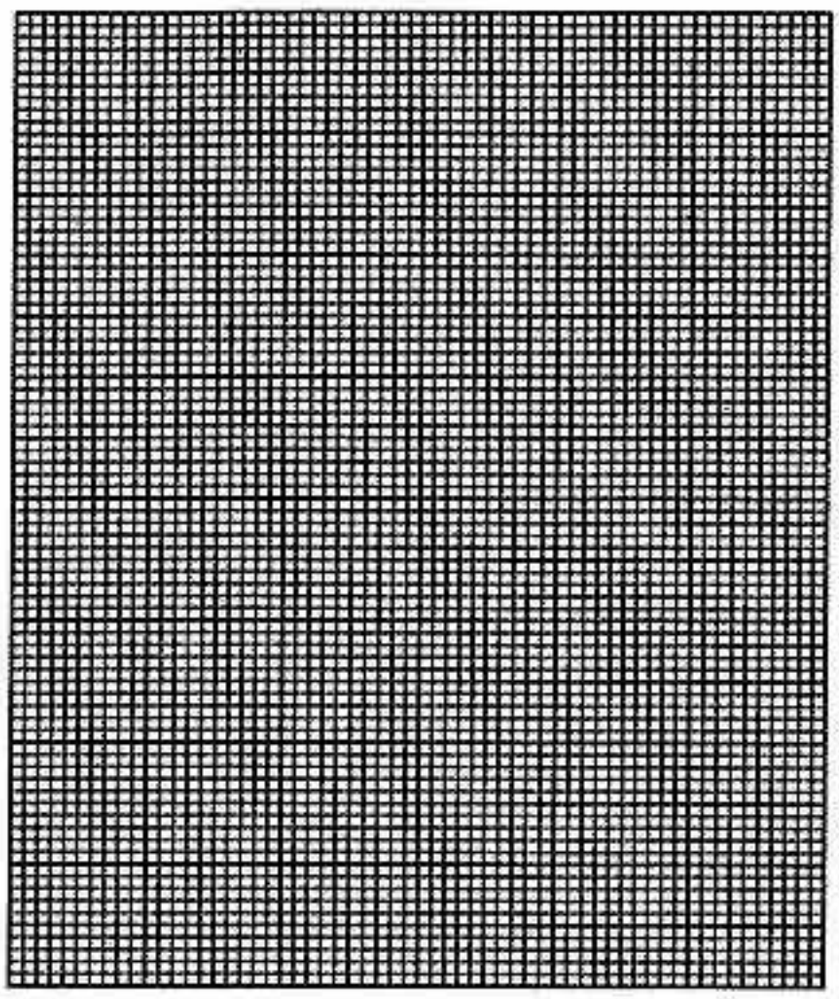
.....

( 5 ) **The following table shows the marks of 100 students in a maths test :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

Draw the frequency curve of this distribution.

Final Examinations



## 4 Alexandria Governorate

West Educational Zone
Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ kg. ..... 700 gm. ( < *or* > *or* = *or* ≥ )

(2) $\frac{3}{4} : \frac{5}{6} = 9 :$ ..... ( 6 *or* 10 *or* 11 *or* 12 )

(3) $\frac{7}{20}$ = ..... ( 7 % *or* 20 % *or* 35 % *or* 42 % )

(4) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals .....
( 90° *or* 100° *or* 120° *or* 180° )

(5) 4 $m^3$ = ..... $dm^3$ ( 40 *or* 400 *or* 4 000 *or* 40 000 )

(6) If the numbers 4 , $x$ , 12 , 18 are proportional , then $x$ = .....
( 6 *or* 8 *or* 10 *or* 12 )

(7) 8 hours : 3 days = 1 : ..... ( 3 *or* 6 *or* 9 *or* 12 )

(8) If $\frac{5}{8} = \frac{15}{x}$ , then $x$ = ..... ( 8 *or* 16 *or* 24 *or* 32 )

(9) If the distance between two cities on a map is 3 cm. , and the real distance between them is 9 km. , then the drawing scale of the map = 1 : .....
( 3 *or* 3 000 *or* 30 000 *or* 300 000 )

(10) If the number of boys in a class is 35 % from the total number of pupils , then the percentage of girls is ..... ( 35 % *or* 65 % *or* 50 % *or* 55 % )

(11) The cuboid has six faces each of them is .....
( a rectangle *or* a square *or* a rhombus *or* a cube )

(12) If the marks of 6 students in one exam is 29 , 33 , 57 , 40 , 36 , 49 , then the range of these marks = .....
( 32 *or* 33 *or* 28 *or* 86 )

## 2 Complete each of the following :

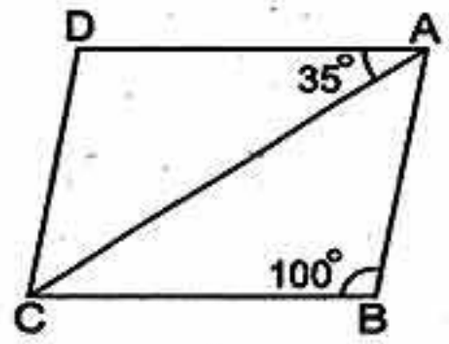
( 1 ) The volume of a cube of edge length 4 cm. = ..... $cm^3$

( 2 ) As comparing between two similar quantities or numbers and of the same unit , then the resultant fraction is called .....

( 3 ) The ratio between the circumference of the circle and its diameter length = ..... : .....

( 4 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

( 5 ) **In the opposite figure :**
ABCD is a parallelogram
, then m (∠ ACD) = ..... °




( 6 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

( 7 ) $\frac{\text{The drawing length}}{\text{The real length}}$ = .....

( 8 ) The maximum mark – The minimum mark = .....

## 3 Answer the following :

( 1 ) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 , if the weight of Ahmed is 60 kilograms.
Calculate the weight of Hani.

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( 2 ) If Hazem studies 21 hours weekly , then find the rate of his studying daily.

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( 3 ) A cuboid of volume is 2 128 $cm^3$ , its height is 14 cm. Find the area of its base.

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Final Examinations

( 4 ) A swimming pool in the shape of a cuboid , whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

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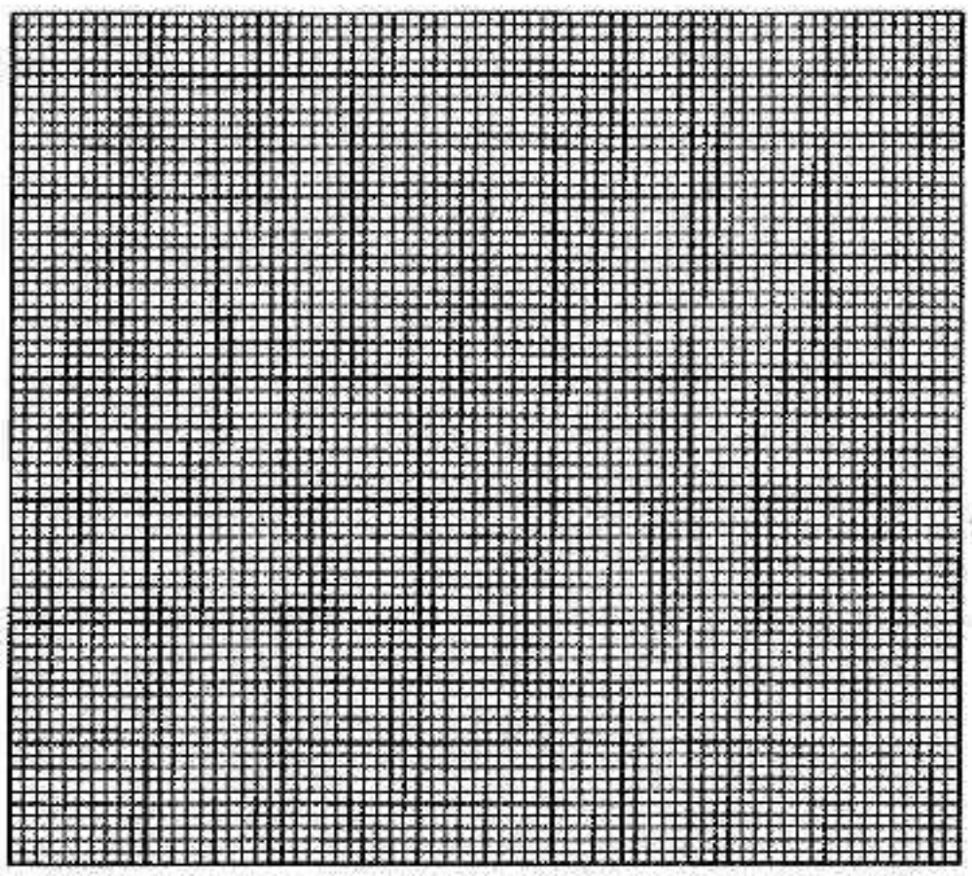
**( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 12 | 11 | 40 |

Represent these data using the frequency curve.



## 5 El-Kalyoubia Governorate

Banha Educational Zone
Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = .....

( 3 : 5 *or* 2 : 5 *or* 5 : 3 *or* 5 : 2 )

( 2 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 *or* 18 *or* 20 *or* 22 )

( 3 ) $\frac{3}{4}$ = ..... (in a decimal form) ( 0.2 *or* 0.25 *or* 0.5 *or* 0.75 )

( 4 ) A car consumes 20 litres of petrol to cover a distance 250 km. , then the rate of consumption of the car is .....

( 0.08 L./km. *or* 0.8 L./km. *or* 8 L./km. *or* 80 L./km. )

## Final Examinations

( 5 ) If the real length of an insect is 0.3 mm. and its length in a picture 4.5 cm. , then the drawing scale = .....

( 1 : 15 **or** 1 : 150 **or** 150 : 1 **or** 15 : 1 )

( 6 ) $\frac{3}{10}$ = .....

( 300 % **or** 40 % **or** 30 % **or** 0.3 % )

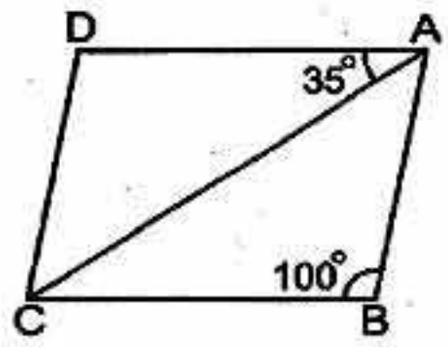
( 7 ) If the volume of a cuboid is 64 $cm^3$ and the area of its base 16 $cm^2$ , then its height = .....

( 4 m. **or** 0.4 cm. **or** 4 dm. **or** 4 cm. )

( 8 ) **In the opposite figure :**

ABCD is parallelogram

, then m (∠ ACD) = .....




( 35° **or** 55° **or** 45° **or** 60° )

( 9 ) A cube , the sum of lengths of all edges is 132 cm.

, then its volume = .....

( 1 771 $cm^3$ **or** 1 331 $cm^3$ **or** 1 444 $cm^3$ **or** 299 968 $cm^3$ )

(10) In your class , if the percentage of boys is 35 % from the total number of pupils , then the percentage of the girls in this class = .....

( 65 % **or** 55 % **or** 75 % **or** 35 % )

(11) The following data are descriptive data except .....

( favorite color **or** age **or** birth place **or** blood species )

(12) If the numbers 9 , 21 , 3 , $x$ are proportional , then $x$ = .....

( 9 **or** 8 **or** 7 **or** 6 )

## 2 Complete the following :

( 1 ) ABC is an equilateral triangle where AB = 5 cm. , then the ratio between AB and the perimeter of triangle ABC = ..... : .....

( 2 ) The range of the set of values 50 , 25 , 35 , 20 is .....

( 3 ) An agricultural tractor ploughs 28 feddans in 4 hours , the time which need to plough 42 feddans is ..... hours.

( 4 ) The ratio between child's age and his father is 1 : 10 and the age of child is 6 years , then the father's age = ..... years.

( 5 ) Hasnaa drew a picture for Omar with drawing scale 1 : 40 , if the real height of Omar is 160 cm. , then the height of Omar in the picture = ..... cm.

( 6 ) If one angle in a parallelogram is right , then it is called .....

( 7 ) 2.65 litres = ..... $dm^3$ = ..... $cm^3$

( 8 ) 16 kirats : 1 feddan = ..... : ..... (in the simplest form)

Final Examinations

**3 Answer the following :**

**( 1 )** Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 At the end of the year , the profit was L.E. 3 900 Calculate the share of each of them from the profit.

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**( 2 )** A building worker used 1 500 bricks to build a wall , calculate the volume of the wall in $m^3$ if the brick is in the shape of a cuboid of dimension 25 cm. , 12 cm. , 6 cm.

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**( 3 )** An auto fair owner bought a car for L.E. 45 000 , then he spent L.E. 5 000 for repairing it , then he sold it for L.E. 55 000 Calculate :

**[a]** The profit after selling.

**[b]** The percentage of profit.

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**( 4 )** 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square of side length is 25 cm. Find the height of water in the vessel.

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**( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons :**

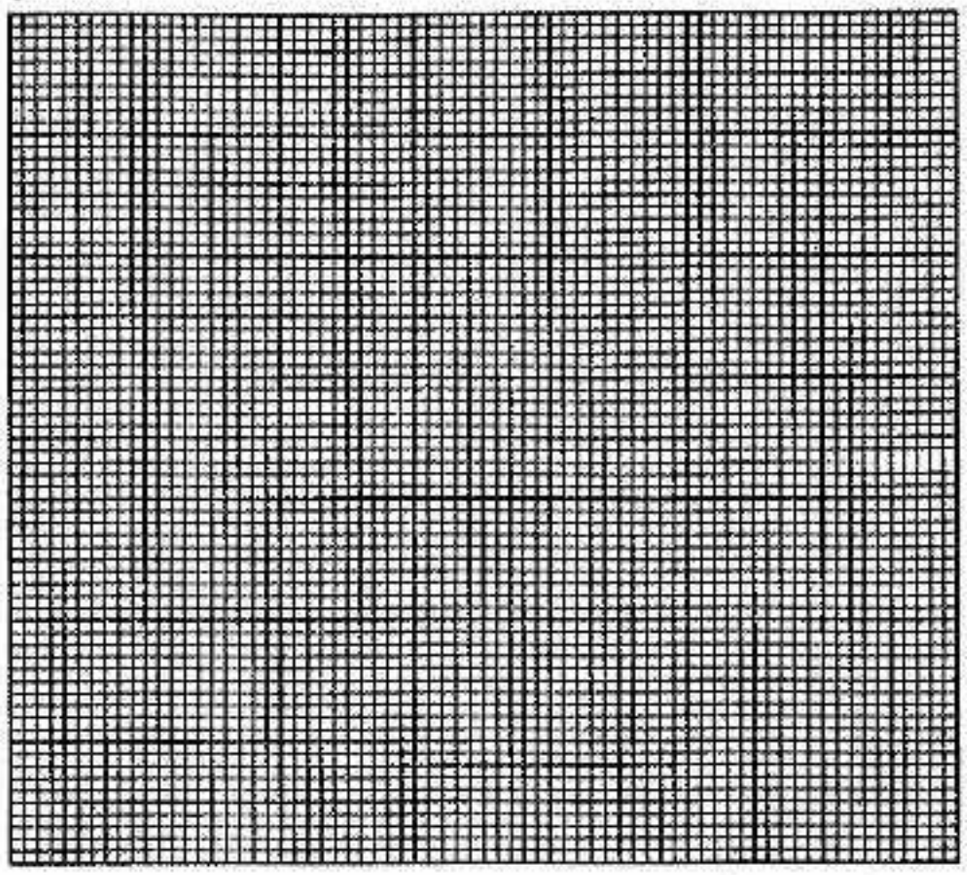
| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | X | 8 | 12 | 11 | 40 |

**[a]** Find the value of X

.....

Final Examinations

**[b]** Represent these data using the frequency curve.

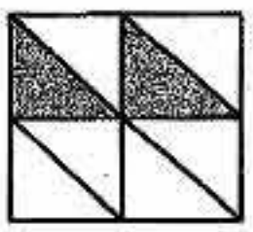




## Answer the following questions :

### 1 Choose the correct answer :

( 1 ) The fraction that represents the shaded part = .....



( $\frac{1}{4}$ *or* $\frac{3}{4}$ *or* $\frac{2}{6}$ *or* $\frac{4}{7}$ )

( 2 ) 0.23 $m^3$ = ..... L ( 0.23 *or* 230 *or* 2.3 *or* 0.023 )

( 3 ) If $\frac{4}{6} = \frac{8}{x}$ , then $x + 2$ = ..... ( 15 *or* 14 *or* 16 *or* 12 )

( 4 ) The ratio between 15 hours , one day = .....

( 1 : 15 *or* 15 : 1 *or* 8 : 5 *or* 5 : 8 )

( 5 ) If the range of some values is 40 and the number of sets is 10 , then the length of set = ..... ( 5 *or* 7 *or* 6 *or* 4 )

( 6 ) All of the following data are quantitative except .....

( tallness *or* age *or* name *or* phone number )

( 7 ) The number of angles in the following shape = .....

( 1 *or* 2 *or* 3 *or* 4 )

( 8 ) The range of the values 29 , 33 , 57 , 40 , 36 is .....

( 27 *or* 28 *or* 29 *or* 24 )

(9) If 10 A , 2 , 2 A , B are proportional , then B = .....

( 0.2 *or* 0.4 *or* 0.5 *or* 0.3 )

(10) If $x$ , 16 , 6 , 8 are proportional , then $x$ = .....

( 1 *or* 6 *or* 8 *or* 12 )

(11) 6.5 L. = ..... $dm^3$ ( 56 *or* 6.5 *or* 5 600 *or* 56 000 )

(12) If a car covered 180 km. in three hours , then the velocity of this car = ..... km./hr. ( 80 *or* 60 *or* 50 *or* 20 )

## 2 Complete the following :

(13) $\frac{5}{4}$ : 2 = ..... : ..... (in the simplest form)

(14) If the lower limit of the set = 10 and the upper limit = 30 , then its centre = .....

(15) The ratio between the width and the length of a rectangle is 3 : 4 , then length : perimeter = .....

(16) An amount of money is divided between two persons in the ratio 5 : 6 , then what the first took = ..... the total.

(17) 1 – (24 % + 35 %) = ..... %

(18) If the drawing scale < 1 , its represents .....

(19) Discover the pattern and write the description of  is .....

(20) The range of values (6 , 2 , 7 , $x$) is 9 , then $x$ = .....

## 3 Answer the following questions :

(21) In a school , if the number of students is 560 students , if the number of girls $\frac{3}{5}$ of boys , find the number of each of boys and girls.

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(22) Ahmed drew a picture of his brother Osama by drawing scale 1 : 40 , if the real length is 160 cm. Find the drawing length.

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Final Examinations

**(23)** A cube of cheese , its edge length is 15 cm. , it is wanted to be divided it into small cubes , the edge length of each is 3 cm. for presenting them through meals. Calculate the number of the resulting small cubes.

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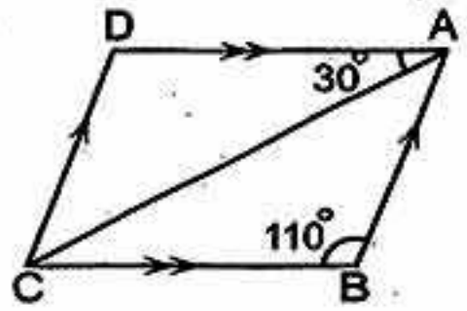
**(24)** The opposite figure shows a parallelogram in which m (∠ B) = 110° and m (∠ DAC) = 30°
Find : m (∠ D) , m (∠ BAC) and m (∠ ACD)

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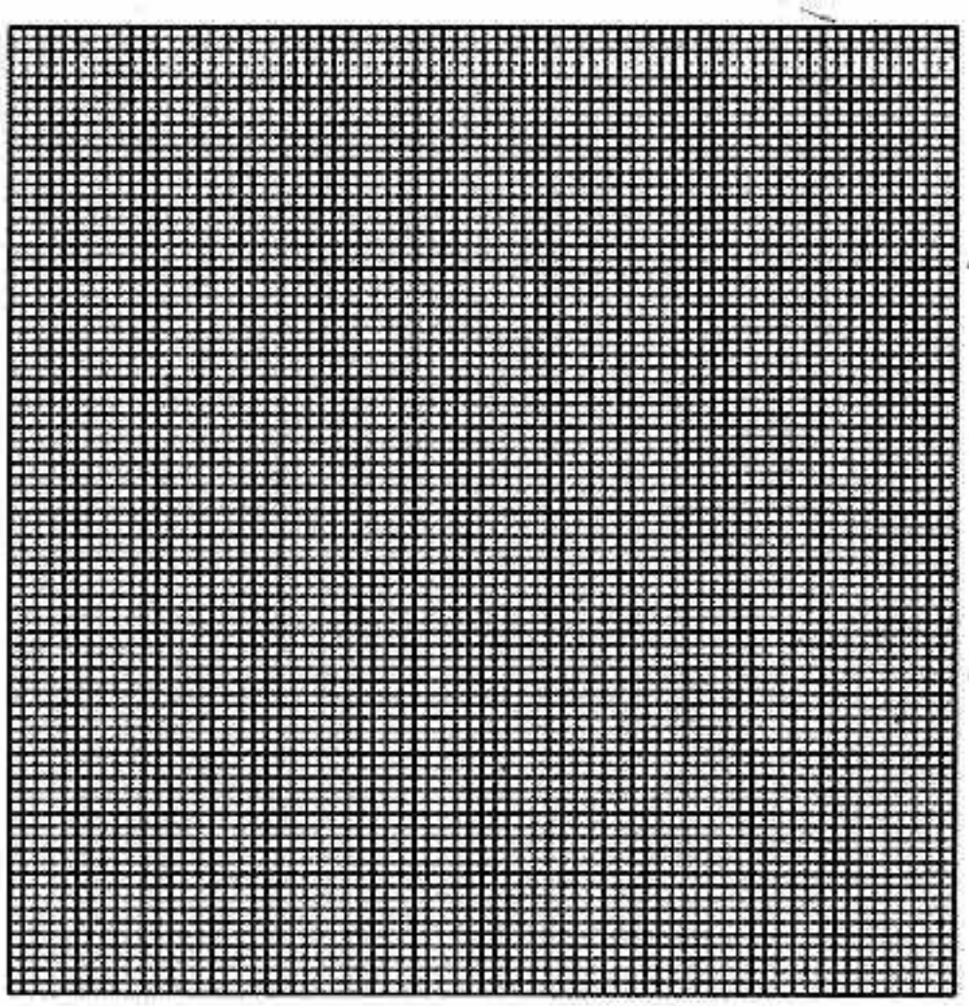
**(25) The following table shows a sample of patients who suffer from a certain disease in a hospital due to the hours which were spent till they became healthy :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – | 6 – | Total |
|---|---|---|---|---|---|---|---|
| Number of patients | 7 | 11 | 15 | 6 | 4 | 2 | 45 |

Represent these data by a frequency curve.



Final Examinations

## 7 El-Monofia Governorate

Shibin El-Kom Educational Directorate
Maths Department

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The following data are descriptive data except .....

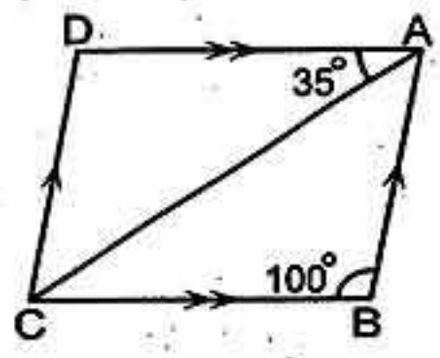
( favorite color **or** age **or** birth place **or** blood species )

**( 2 ) In the opposite figure :**

ABCD is parallelogram

, then m (∠ ADC) = .....

( 35° **or** 45° **or** 100° **or** 135° )




( 3 ) If the numbers 3 , 5 , $x$ and 20 are proportional , then $x$ = .....

( 6 **or** 12 **or** 15 **or** 21 )

( 4 ) If one of angles of the parallelogram is right , then the resulting figure is a .....

( rectangle **or** square **or** rhombus **or** cube )

( 5 ) If an agriculture tractor ploughs 28 feddans in 4 hours , then the time needed to plough 42 feddans is ..... hours. ( 4 **or** 6 **or** 7 **or** 8 )

( 6 ) $\frac{5}{4} : 3\frac{1}{4}$ = ..... ( 5 : 13 **or** 1 : 3 **or** 3 : 1 **or** 5 : 9 )

( 7 ) The sum of edge lengths of a cube is 24 cm. , then its volume = ..... $cm^3$

( 2 **or** 8 **or** 12 **or** 24 )

( 8 ) 25 % of 1 000 = ..... ( 2 000 **or** 1 500 **or** 250 **or** 500 )

( 9 ) The ratio between 250 grams and $\frac{1}{2}$ kg. = .....

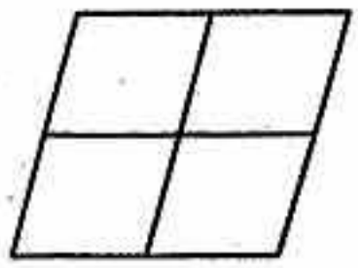
( 2 : 1 **or** 2 : 3 **or** 1 : 2 **or** 3 : 2 )

(10) A machine produces 600 metres of clothes regularity in one hour and half , then the rate of production in metre per hour = ..... metre/hour

( 500 **or** 400 **or** 300 **or** 200 )

**(11) In the opposite figure :**

The number of parallelograms which can be obtained is .....



( 4 **or** 5 **or** 7 **or** 9 )

(12) The following in this pattern △ ○ ○ □ △ ○ ○ is .....

( △ **or** ○ **or** □ **or** ◇ )

Final Examinations

**2 Complete :**

( 1 ) $\frac{1}{4}$ = ..... %

( 2 ) If the dimensions of cuboid are equal in length , then it is called a .....

( 3 ) The range of the set of the values 7 , 3 , 15 and 8 is .....

( 4 ) The ratio between the side length of the square and its perimeter
= ..... : .....

( 5 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x - 2$ = .....

( 6 ) 1 500 $dm^3$ = ..... litres

( 7 ) If the real length of an insect is 0.5 millimetres and its length in the picture is 4.5 cm. , then its drawing scale = ..... : .....

( 8 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

**3 Answer the following :**

( 1 ) Heba bought a vacuum cleaner for 220 pounds with a discount 20 %
Calculate the price before discount.

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( 2 ) If the ratio between Hadir's weight and Basma's weight is 5 : 6 and the difference between their weights is 10 kg. Calculate the weight of each of them.

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( 3 ) In a metallic cube whose edge length is 12 cm. we want to melt and convert it to a number of cuboid alloys of dimensions 3 cm. , 4 cm. and 6 cm.
Calculate the number of alloys which can be obtained.

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( 4 ) A container has 12 litres of oil. We need to distribute it on small bottles with each one of the capacity 400 $cm^2$ Calculate the number of the needed bottles.

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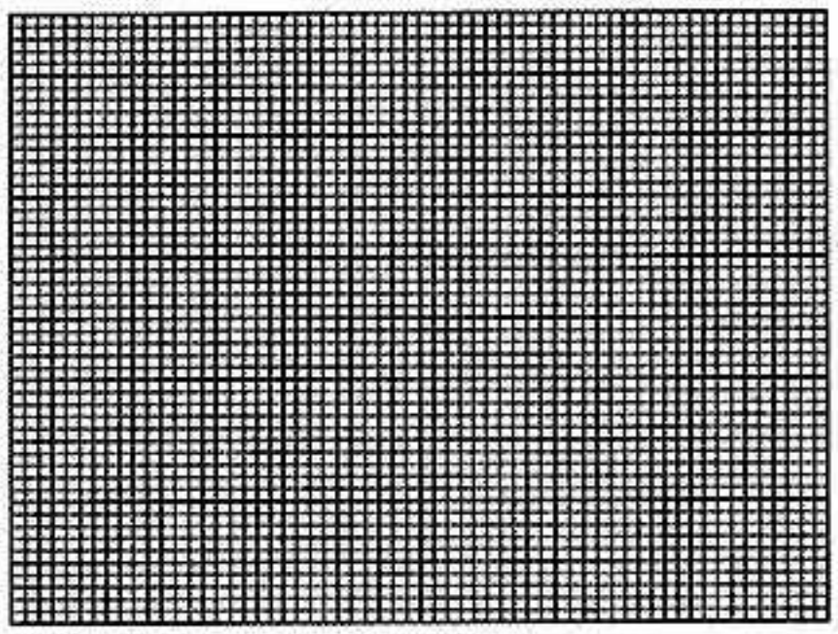
**( 5 ) The following table shows the marks of 100 pupils in mathematics :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| No. of pupils | 15 | 40 | 30 | 15 | 100 |

Draw the frequency curve for this distribution.





## Answer the following questions :

### 1 Choose the correct answer :

**( 1 )** If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 **or** 18 **or** 20 **or** 22 )

**( 2 )** The following data are descriptive data except .....

( favorite color **or** age **or** birth place **or** blood species )

**( 3 )** The volume of a cube is 27 $cm^3$ , then the perimeter of its base equals ..... cm.

( 36 **or** 24 **or** 27 **or** 12 )

**( 4 )** The ratio between the circumference of the circle and its diameter length = ..... : ..... ( $\pi : 1$ **or** $2\pi : 1$ **or** $1 : 4$ **or** $\pi : d$ )

**( 5 )** If the volume of a cuboid = 300 $cm^3$ , its base area = 25 $cm^2$ , then its height = ..... cm. ( 12 **or** 13 **or** 14 **or** 15 )

**( 6 )** If the range is 40 and the length of the set is 5 , then the number of sets = ..... ( 5 **or** 6 **or** 7 **or** 8 )

**( 7 )** If one angle of the parallelogram is right and its sides are equal in length , then it is called ..... ( square **or** rhombus **or** triangle **or** rectangle )

**( 8 )** $1 - (35\ \% + 25\ \%)$ = ..... ( $\frac{1}{2}$ **or** $\frac{1}{3}$ **or** $\frac{2}{5}$ **or** $\frac{3}{4}$ )

## Final Examinations

(9) The diagonals are perpendicular and have the same length in the .....
( square **or** rectangle **or** trapezium **or** parallelogram )

(10) 1.45 litres + 0.5 $dm^3$ = ..... litres. ( 1.5 **or** 1.95 **or** 1.55 **or** 6.5 )

(11) The percentage is a ratio , which its second term is .....
( 10 **or** 100 **or** 1 000 **or** 10 000 )

(12) How many bottles of 750 mL. each can be filled with 30 litres of water ?
( 4 **or** 40 **or** 400 **or** 4 000 )

(13) $\frac{1}{8}$ day : 6 hours : $\frac{1}{2}$ day = ..... : ..... : .....
( 1 : 2 : 6 **or** 1 : 2 : 4 **or** 1 : 2 : 3 **or** 3 : 2 : 1 )

(14) 12 % of 500 kg. = ..... kg. ( 40 **or** 50 **or** 60 **or** 70 )

## 2 Complete the following :

(15) If the ratio between measures of the angles of triangle is 5 : 6 : 7 , then the measure of the greatest angle = ..... °

(16) 16 kirats : 1 feddan = ..... : ..... (in the simplest form)

(17) 2.65 litres = ..... $dm^3$

(18) $\frac{7}{20}$ = ..... %

(19) If the ratio a : b = 4 : 3 and the ratio b : c = 2 : 3 , then the ratio
a : b : c = ..... : ..... : .....

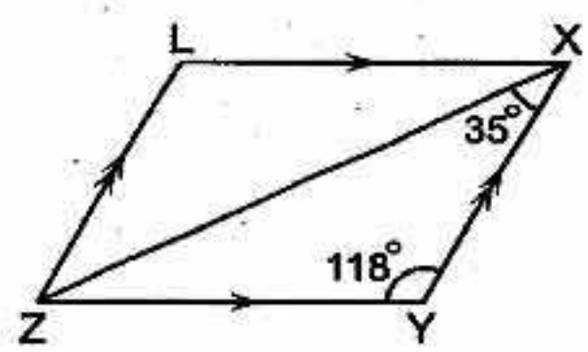
(20) If the sum of lengths of all edges of a cube is 132 cm. , then its volume = ..... $cm^3$

(21) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

(22) If Hassan spends L.E. 45 within three days , then the rate of what Hassan spends per day is .....

## 3 Answer the following :

(23) **In the opposite figure :**
XYZL is a parallelogram in which
m (∠ Y) = 118° , m (∠ YXZ) = 35°
Find : m (∠ L) , m (∠ LXZ)

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Final Examinations

**(24)** A metallic cube of edge length 12 cm. , it needs to be converted into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

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**(25)** Three persons shared in business. The first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds. At the end of the year the net profit was 5 520 pounds. Calculate the share of each of them.

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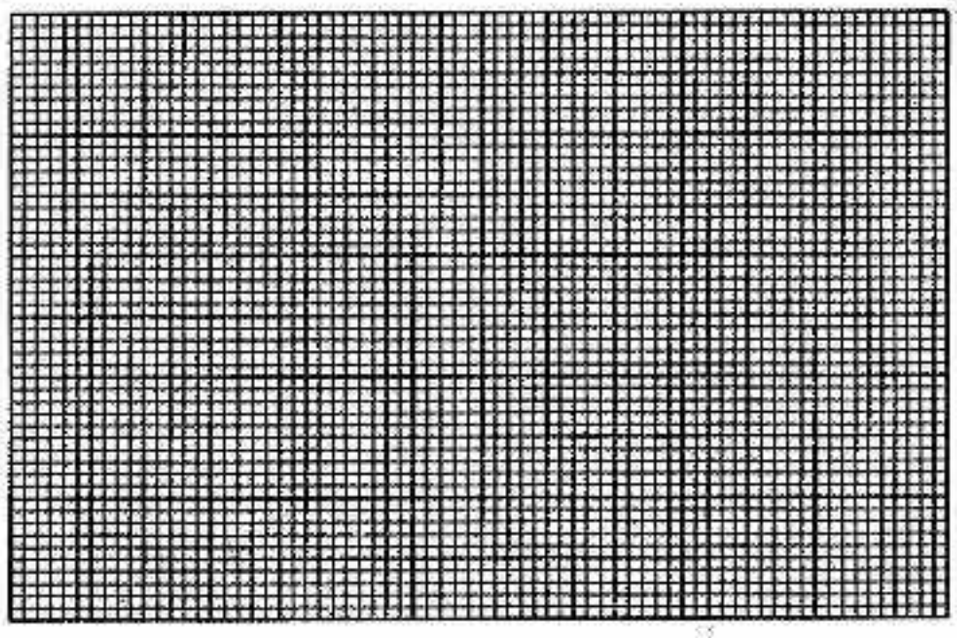
**(26) The following table shows the marks of 100 students in one month in maths :**

| Marks | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve for this distribution.



## 9 El-Dakahlia Governorate

Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** The ratio between the length of diameter of circle and its circumference is .....

( 1 : 1 **or** 1 : 4 **or** 1 : π **or** π : 1 )

**( 2 )** ..... is a ratio between two different quantities.

( Ratio **or** Proportion **or** Rate **or** Drawing scale )

## Final Examinations

(3) $\frac{x}{5}$ = 60 % , then $x$ + 3 = ..... ( 3 **or** 6 **or** 600 **or** 30 )

(4) $\frac{1}{2} : \frac{3}{4} : \frac{2}{3}$ = ..... ( 6 : 8 : 9 **or** 8 : 9 : 6 **or** 9 : 6 : 8 **or** 6 : 9 : 8 )

(5) If the drawing scale > 1 , then this expresses .....

( magnification **or** reduction **or** congruent **or** otherwise )

(6) If the number of sets is 8 and length of set is 5 , then the range = .....

( 3 **or** 13 **or** 40 **or** 6 )

(7) 20 % of a number = ..... % of half the same number.

( 10 **or** 20 **or** 30 **or** 40 )

(8) Volume of a cube whose sum of edge lengths of two adjecent faces is 56 cm. is ..... $cm^3$ ( 512 **or** 7 **or** 8 **or** 343 )

(9) Parallelogram with equal diagonals in length is called .....

( trapezium **or** rectangle **or** rhombus **or** square )

(10) If the radius length of a circle increases by the ratio 5 % , then the diameter length increases by ratio ..... ( 5 % **or** 10 % **or** 15 % **or** 5 )

(11) All of the following data are descriptive except .....

( address **or** qualifications **or** age **or** birth place )

(12) A car consumes 4 litres of fuel to cover distance 100 km. , then the rate of consumption is ..... litre per km. ( 25 **or** 0.4 **or** 0.04 **or** 400 )

## 2 Complete :

(1) In parallelogram ABCD , m (∠ A) + m (∠ C) = 140° , then m (∠ B) = .....°

(2) The volume of cuboid with dimensions 10 cm. , 8 cm. and 7 cm. = ..... $cm^3$

(3) Age , birth date and weight are called ..... data.

(4) 1.5 litre + 0.35 $dm^3$ + 150 $cm^3$ = ..... $cm^3$

(5) If A = $\frac{1}{2}$ B , then B : A = ..... %

(6)  ..... (in the same pattern)

(7) If the lengh of an insect is 3 mm. , if its length in the picture is 6 cm. , then the ratio of magnification is .....

(8) The area of a triangle = .....

**3 Answer the following :**

**( 1 )** If the number of pupils in a school is 630 pupils , if the ratio between the number of boys and the number of girls is 5 : 4 Find the number of each.

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**( 2 )** A map is drawn with scale 1 : 400 000 , if the distance between two cities is 12 km. Find the distance between them on the map.

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**( 3 )** A trader bought a TV set by L.E. 4 500 and sold it with profit 10 %
Find the selling price.

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**( 4 )** A box in a cuboid shape with square base its side length is 40 cm. and height 30 cm. is filled by bars of soaps in a cuboid shape with dimensions 6 cm. , 4 cm. and 5 cm. Find the greatest number of soaps can be put in the box.

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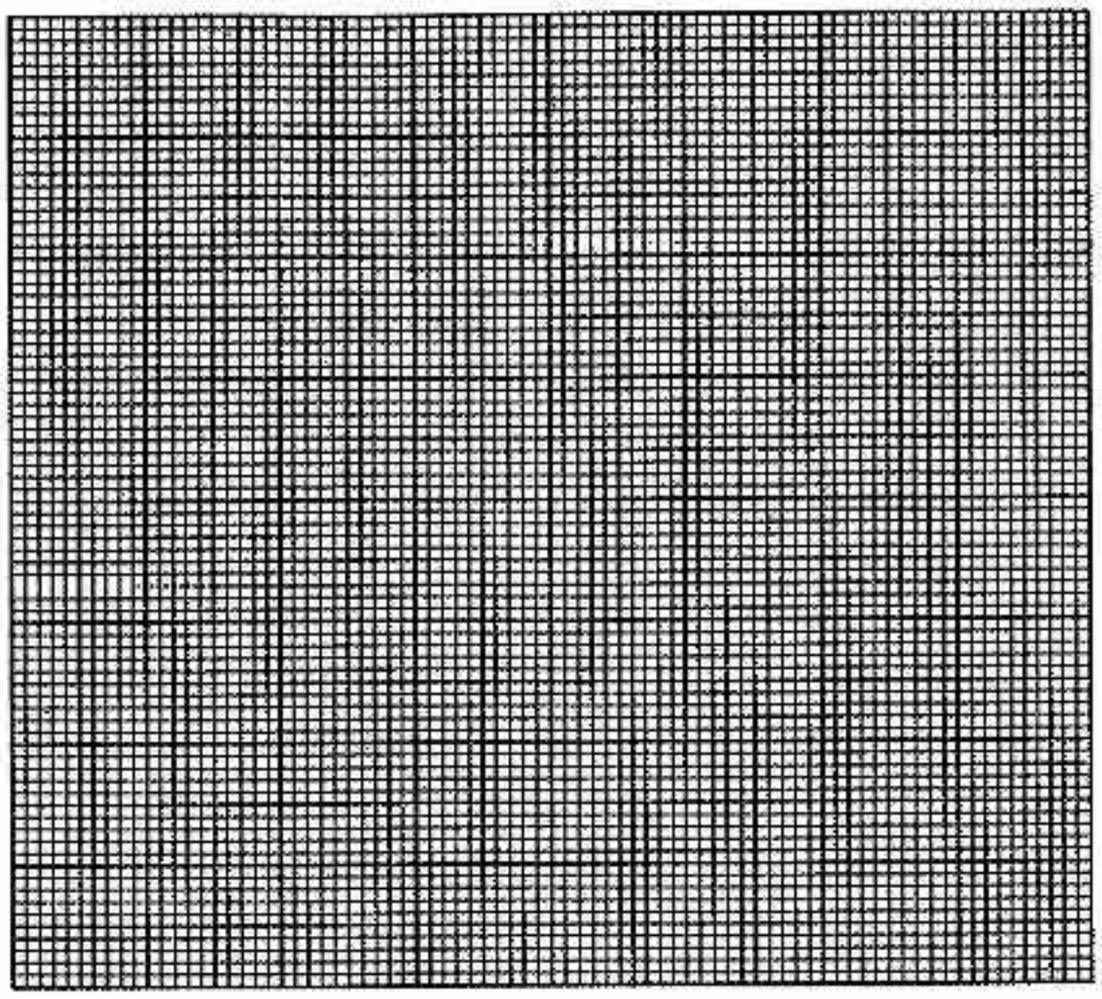
**( 5 ) The following table shows the number of hours which 50 pupils spend to study their lessons daily :**

| Number of hours | 1 – | 3 – | 5 – | 7 – | 9 – 11 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 10 | 14 | 12 | 8 | 50 |

Represent these data by using a frequency curve.

Final Examinations



## 10 Ismailia Governorate

South Ismailia Educational Zone
Suez Canal Language School

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = .....

( 2 : 5 **or** 3 : 6 **or** 2 : 3 **or** 5 : 2 )

**( 2 )** If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = .....

( 2 **or** 5 **or** 6 **or** 15 )

**( 3 )** The following data are descriptive data except .....

( favorite colour **or** age **or** birth place **or** blood species )

**( 4 )** If the number 2 , 7 , $x$ and 21 are proportional , then $x$ = .....

( 6 **or** 21 **or** 12 **or** 7 )

**( 5 )** If the real length of a tree is 6 m. and its drawing , length is 3 cm. , then the drawing scale = ..... : .....

( 1 : 100 **or** 1 : 200 **or** 1 : 300 **or** 1 : 600 )

**( 6 )** 0.3 $m^3$ = ..... $dm^3$

( 3 000 **or** 300 **or** 30 **or** 3 )

**( 7 )** If the volume of a cuboid equals 315 $cm^3$ , its base with length 9 cm. and width 7 cm. , then its height = ..... cm.

( 7 **or** 5 **or** 63 **or** 45 )

**( 8 )** The two diagonals are equal in length and perpendicular in .....

( rectangle **or** rhombus **or** triangle **or** square )

Final Examinations

(9) $\frac{4}{5}$ = ..... % (50 *or* 60 *or* 70 *or* 80)

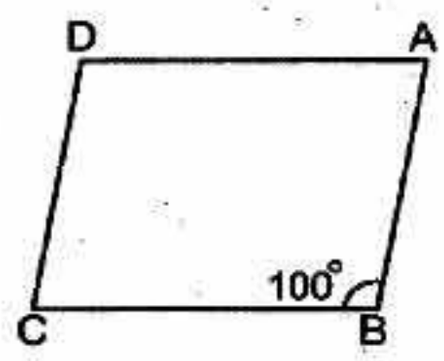
(10) If Hany drinks 21 glasses of milk weekly , then he drinks ..... glasses of milk every 3 days. (3 *or* 6 *or* 9 *or* 12)

(11) $\frac{1}{2}$ kg. : 700 gm. = ..... ( 2 : 7 *or* $\frac{7}{8}$ *or* $\frac{5}{7}$ *or* $\frac{7}{9}$ )

(12) In the opposite figure :

ABCD is a parallelogram , then :

m (∠ D) = ..... °




(100 *or* 60 *or* 80 *or* 70)

## 2 Complete :

(1) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

(2) If the drawing scale < 1 , then this expresses .....

(3) A cuboid of dimensions 5 cm. , 6 cm. and 2 cm. , its volume is ..... $cm^3$

(4) 1.5 litres + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

(5) 1 – (15 % + 45 %) = ..... %

(6) $\frac{1}{4}$ : $\frac{1}{3}$ : $\frac{1}{2}$ = ..... : ..... : ..... (in the simplest form)

(7) The number of pupils in a primary school is 360 pupils , if the ratio between the number of boys and the number of girls is 1 : 2 , then the number of boys = .....

(8) If the edge length of a cube = 4 cm. , then the volume = ..... $cm^3$

## 3 Answer the following :

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

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Final Examinations

( 2 ) Three persons started a business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year the profit was 5 520 pounds. Calculate the share of each of them.

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( 3 ) 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square base of side length 25 cm. Find height of the water in the vessel.

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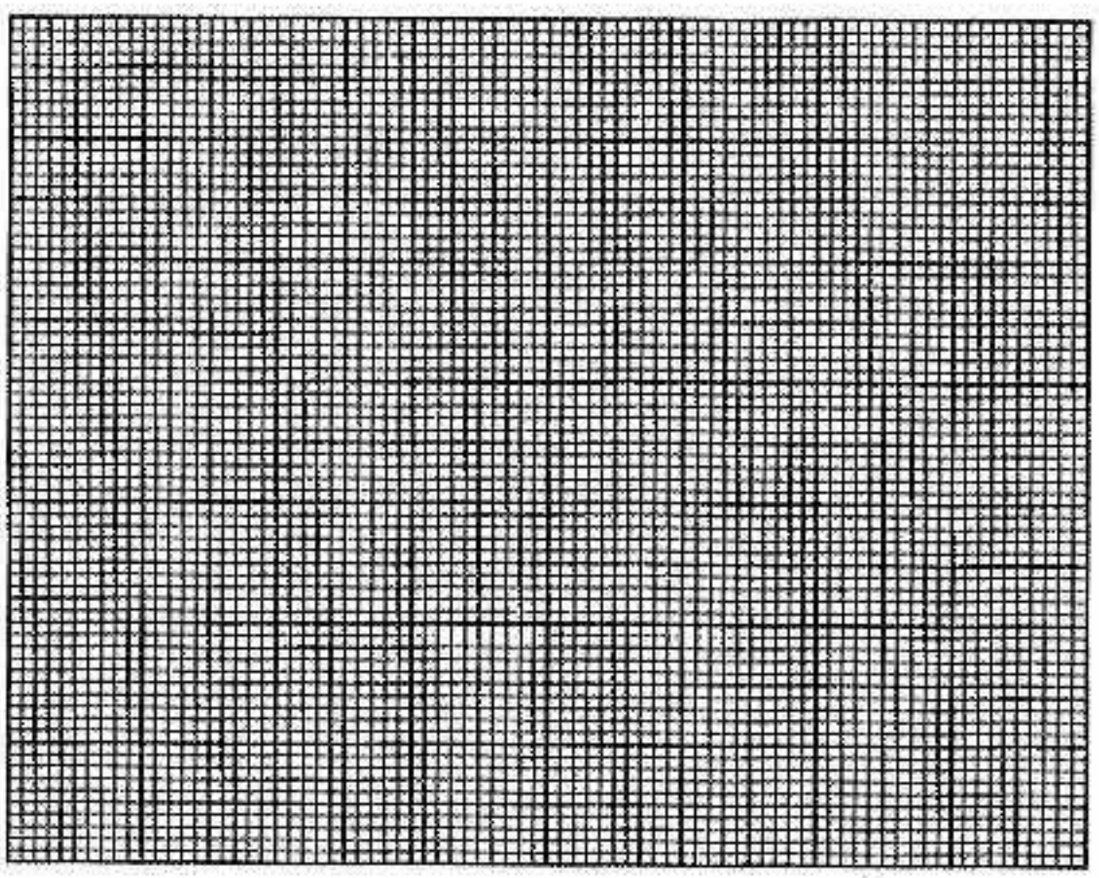
( 4 ) **The following table shows of money in pounds paid by a group of contributors in a charity :**

| The sum | 50 – | 60 – | 70 – | 80 – | 90 – | 100 – |
|---|---|---|---|---|---|---|
| Number of contributors | 5 | 7 | 10 | 12 | 10 | 7 |

Draw the frequency curve of this distribution.



Final Examinations

## 11 Suez Governorate

South Educational Directorate
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{2}{5} : \frac{7}{2}$ = ..... : ..... (5 : 7 **or** 4 : 35 **or** 2 : 7 **or** 5 : 2)

(2) In the parallelogram , the sum of the measures of any two consecutive angles = .....° (45 **or** 90 **or** 180 **or** 360)

(3) The percentage is a ratio its second term is ..... (10 **or** 100 **or** 200 **or** 1 000)

(4) 39 days ≃ ..... weeks. (4 **or** 5 **or** 6 **or** 7)

(5) The ratio between the length of the side of the equilateral triangle and its perimeter = ..... : ..... (1 : 3 **or** 3 : 1 **or** 4 : 1 **or** 1 : 4)

(6) Cuboid of dimensions (5 cm. , 2 cm. , 7 cm.) , its volume = ..... $cm^3$ (24 **or** 48 **or** 65 **or** 70)

(7) The following data are descriptive data except ..... (favorite colour **or** birth place **or** age **or** blood species)

(8) If $\frac{x}{5}$ = 40 % , then $x$ = ..... (2 **or** 4 **or** 5 **or** 8)

(9) 3 $m^3$ = ..... litres. (300 **or** 3 000 **or** 300 000 **or** 3 000 000)

(10) $\frac{3}{4}$ = ..... % (25 **or** 50 **or** 57 **or** 75)

(11) An iron with price L.E. 120 at 20 % discount , the price after discount = L.E. ..... (90 **or** 96 **or** 100 **or** 140)

(12) If the length of an insect in the picture is 4 cm. and its real length is 2 mm. , the drawing scale is ..... : ..... (2 : 1 **or** 1 : 2 **or** 20 : 1 **or** 1 : 20)

**2 Complete the following :**

(1) Half km. : 250 metres = ..... : ..... (in the simplest form)

(2) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

(3) If A : B = 3 : 4 , B : C = 4 : 5 , then A : C = ..... : .....

(4) The drawing scale = $\frac{\text{.....}}{\text{The real length}}$

Final Examinations

( 5 ) The two diagonals are equal in length in each of ..... , .....

( 6 ) 6 , 8 , 3 , ..... (Complete the missing number to be proportional)

( 7 ) $\frac{1}{2} : \frac{1}{3}$ = ..... : ..... (in the simplest form)

( 8 ) Cuboid of volume is 1 400 $cm^3$ , its height is 14 cm. , the area of its base = ..... $cm^2$

## 3 Answer the following questions :

( 1 ) Hassan spends L.E. 45 within 3 days , what is the rate of what Hassan spends per day ?

.....

( 2 ) A vessel in the shape of a cube with edge length 30 cm. is filled with honey. Calculate the capacity of the vessel.

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.....

( 3 ) In one of our schools , there are 560 students , if the number of girls is $\frac{3}{5}$ the number of boys. Find each of the number of boys and girls.

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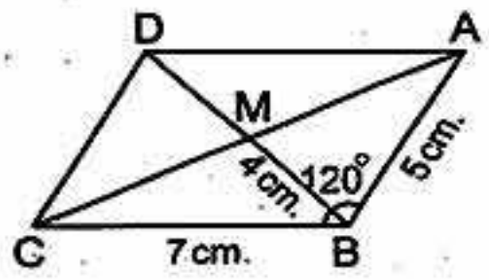
( 4 ) **In the opposite figure :**

ABCD is a parallelogram in which

AB = 5 cm. , BC = 7 cm.

BM = 4 cm. , m (∠ ABC) = 120°

Without using geometrical instruments , find m (∠ ADC) and the perimeter of Δ BCD

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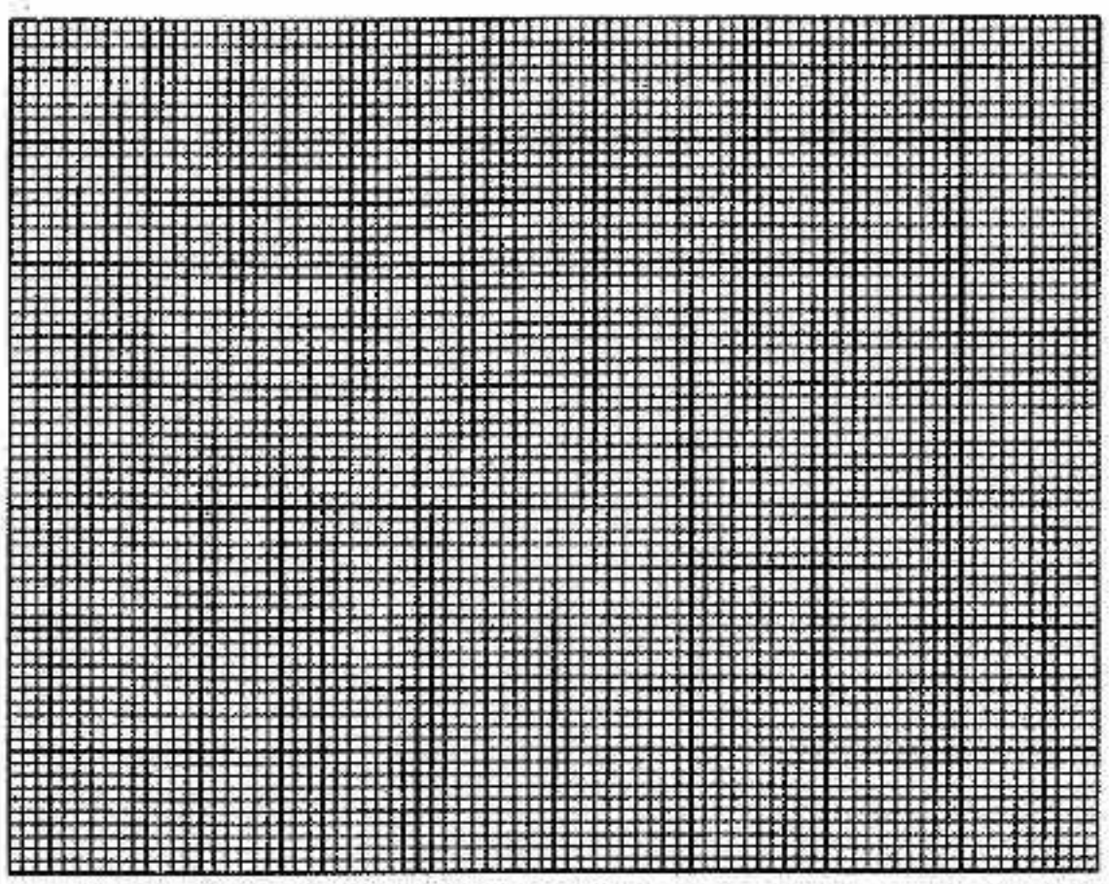
( 5 ) **The following table shows the number of hours which the pupils of a class spend daily in front of the computer :**

| Number of hours | – 1 | – 2 | – 3 | – 4 | – 5 | – 6 | Total |
|---|---|---|---|---|---|---|---|
| Number of pupils | 8 | 10 | 12 | 6 | 4 | 2 | 42 |

Represent these data by a frequency curve.

Final Examinations



## 12 Port Said Governorate

Maths Inspector

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) $\frac{2}{3} : 3\frac{1}{3}$ = ..... ( 1 : 2 *or* 1 : 3 *or* 2 : 3 *or* 1 : 5 )

( 2 ) The centimetre cube is a unit of measuring the .....

( length *or* area *or* volume *or* weight )

( 3 ) 18 kirats : 2 feddans = ..... ( 1 : 2 *or* 3 : 8 *or* 1 : 24 *or* 18 : 2 )

( 4 ) If Heba bought a mobile phone for 900 pounds with a discount 10 % , then the price of the mobile phone before the discount is ..... pounds.

( 9 000 *or* 1 000 *or* 990 *or* 100 )

( 5 ) If the drawing scale < 1 , this expresses .....

( equality *or* maximization *or* enlargement *or* minimization )

( 6 ) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of the box = ..... $cm^3$

( 0.729 *or* 1 729 *or* 271 *or* 729 000 )

( 7 ) The diagonals are perpendicular in .....

( rectangle *or* trapezoid *or* rhombus *or* parallelogram )

( 8 ) The ratio between the side length of the square to its perimeter is .....

( 1 : 2 *or* 1 : 3 *or* 4 : 1 *or* 1 : 4 )

Final Examinations

( 9 ) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measurement of the smallest angle is ..... °

( 10 **or** 20 **or** 30 **or** 60 )

(10) $1\frac{3}{4}$ = ..... %

( 25 **or** 50 **or** 75 **or** 175 )

(11) If one angle of parallelogram is right , then it is called .....

( rectangle **or** trapezoid **or** rhombus **or** rhombus )

(12) The following data are descriptive data except .....

( age **or** birth place **or** blood species **or** favourite colour )

## 2 Complete the following :

( 1 ) The range of the set of values 8 , 1 , 9 , 11 and 7 is .....

( 2 ) The agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to plough 42 feddans is ..... hours.

( 3 ) If the height of the fence of the villa in the design is 5 cm. and its real height is 5 metres , then the drawing scale is ..... : .....

( 4 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form).

( 5 ) If A : B = 1 : 2 , B : C = 2 : 5 , then A : C = ..... : .....

( 6 ) A cube of edge length 5 cm. , then its volume = ..... $cm^3$

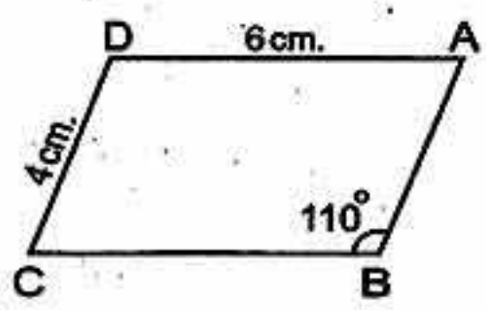
( 7 ) If $\frac{2}{5} = \frac{x}{20}$ , then $x$ = .....

( 8 ) If the volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

## 3 Answer the following :

( 1 ) **In the opposite figure :**

ABCD is a parallelogram , find :




**[a]** m (∠ D) **[b]** m (∠ A)

**[c]** The length of $\overline{AB}$ **[d]** The perimeter of the shape ABCD

.....

.....

( 2 ) If the buying price of electric sets is L.E. 72 000 and sold at 15 % profit.
Calculate the selling price.

.....

.....

( 3 ) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.
Calculate the price of honey , given that the price of one litre is L.E. 20

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( 4 ) In one of our schools , there are 1 000 students , if the ratio between the number of boys and the number of girls is 2 : 3 , find each of the number of boys and girls.

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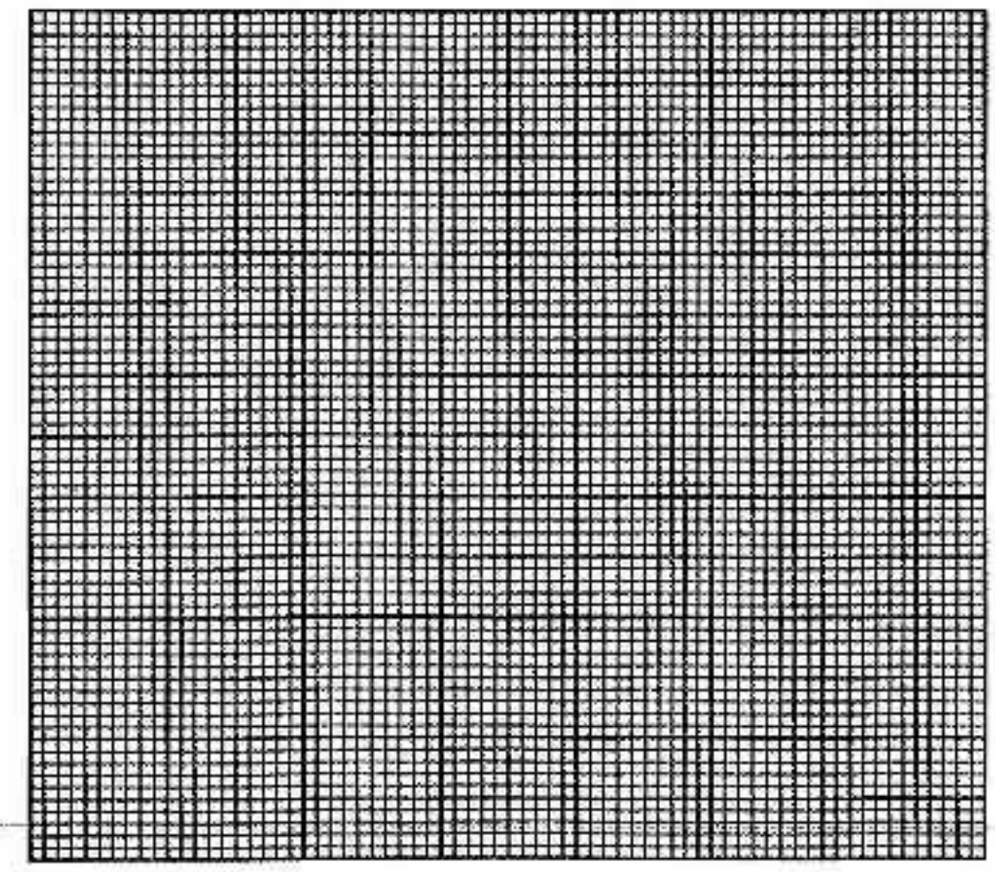
**( 5 ) The following table shows the marks of 50 students in one month in maths :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 6 | 10 | 20 | 14 | 50 |

Represent these data by the frequency curve.



Final Examinations

## 13 Kafr El-Sheikh Governorate — Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer between brackets :**

( 1 ) If the values in the frequency distribution lies between (40 , 90) , then the range of this distribution = ..... ( 130 *or* 50 *or* 80 *or* 180 )

( 2 ) If 5 , 6 , $x$ and 12 are proportional numbers , then $x$ = .....

( 8 *or* 12 *or* 5 *or* 10 )

( 3 ) An agricultural machine ploughs 17 feddans in 8.5 hours , then the rate of performance of the machine = ..... feddans/hour

( 2 *or* 4 *or* 2.5 *or* 4.5 )

( 4 ) If a : b = 50 % and b : c = 2 : 3 , then a : c = .....

( 1 : 2 *or* 2 : 3 *or* 2 : 6 *or* 3 : 1 )

( 5 ) If the volume of a cuboid equals 360 $cm^3$ , its length is 9 cm. and its width is 8 cm. , then its height = ..... cm. ( 5 *or* 40 *or* 48 *or* 72 )

( 6 ) If one angle of the parallelogram is right angle , and has two adjacent sides are equal in length , then it is called .....

( trapezium *or* square *or* rectangle *or* rhombus )

( 7 ) The ratio between the side length of the square and its perimeter = .....

( 4 : 1 *or* 1 : 4 *or* 1 : 3 *or* 1 : 6 )

( 8 ) If the drawing scale < 1 , then it expresses .....

( enlargement *or* congruency *or* reduction *or* equivalent )

( 9 ) 4.250 $cm^3$ = ..... $mm^3$ ( 4 250 *or* 42.5 *or* 0.425 *or* 4.25 )

(10) $3\frac{4}{7} : 3\frac{1}{8}$ = ..... ( 7 : 8 *or* 8 : 7 *or* 1 : 4 *or* 1 : 1 )

(11) If the price of some goods is L.E. 256 and if the price became L.E. 192 during the discount , then the percentage of the discount equals .....

( 16 % *or* 75 % *or* 33 % *or* 25 % )

(12) ABCD is a parallelogram , then m (∠ A) + m (∠ B) = ..... °

( 90 *or* 108 *or* 180 *or* 360 )

## 2 Complete each of the following :

(13) Emad sold a flat with profit 5 % , if his profit was L.E. 7 500 , then the selling price of the flat is L.E. .....

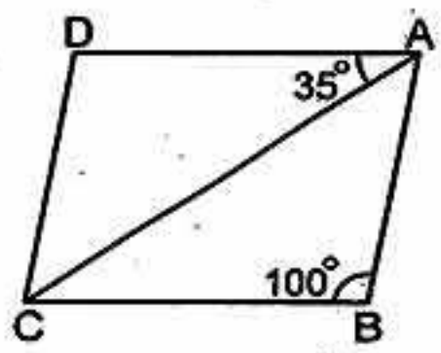
(14) 32 % + 27 % + ..... % = 1

(15) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ = ..... : ..... : ..... (in the simplest form)

(16) **In the opposite figure :**

ABCD is a parallelogram , then

m (∠ ACD) = .....°




(17) If the drawing scale is 1 : 500 000 and a road of real length 12.5 km. , then the length of the road on the map is ..... cm.

(18) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

(19) The following figure in the pattern  is .....

(20) The following table shows the marks of 40 students in a test , then the number of students who got less than 30 marks = .....

| Marks | 10 – | 20 – | 30 – 40 |
|---|---|---|---|
| Number of students | 10 | 13 | 17 |

## 3 Answer the following :

(21) A cube of cheese with edge length 15 cm. , it is wanted to divide it into small cuboids each of dimensions 3 cm. , 5 cm. and 1 cm. Find the number of resulting small cuboids of cheese.

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(22) The ratio between the measures of two consective angles in a parallelogram is 4 : 5 Find the measure of each of them.

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Final Examinations

**(23)** Three persons shared in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000 At the end of the year the profit was L.E. 20 700 Find the share of each one.

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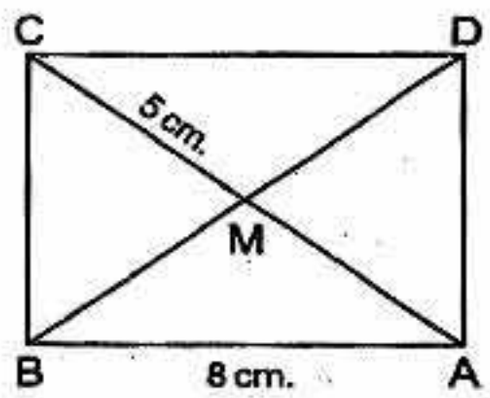
**(24) In the opposite figure :**

ABCD is a rectangle in which AB = 8 cm.

and MC = 5 cm. Find :

**[a]** Length of $\overline{AM}$ **[b]** Length of $\overline{DB}$

**[c]** Perimeter of $\Delta$ AMB

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**(25) The following table shows the marks of 30 pupils in mathematics :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 7 | 10 | 8 | 30 |

Draw the frequency curve for this distribution.

Final Examinations

## 14 El-Beheira Governorate

Rashid Educational Zone
Rashid Language School

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $1\frac{3}{4}$ = ..... % (25 *or* 50 *or* 75 *or* 175)

(2) If 6 , 8 , 3 and $x$ are proportional numbers , then $x$ = .....

(2 *or* 4 *or* 18 *or* 24)

(3) 6 500 $dm^3$ = ..... $m^3$ (6.5 *or* 65 *or* 605 *or* 650)

(4) $\frac{1}{2} : \frac{1}{3}$ = ..... : ..... (1 : 1 *or* 2 : 3 *or* 3 : 2 *or* 3 : 1)

(5) The ratio between the side length of the square and its perimeter

= ..... : ..... (1 : 1 *or* 1 : 3 *or* 1 : 4 *or* 4 : 1)

(6) The diagonals are perpendicular and equal in length in .....

(parallelogram *or* rectangle *or* rhombus *or* square)

(7) If the height of the fence of the villa in the design is 5 cm. and its real height is 5 metres , then the drawing scale is ..... : .....

(1 : 1 *or* 1 : 10 *or* 1 : 100 *or* 1 : 1 000)

(8) The percentage is a ratio which its second term is .....

(10 *or* 100 *or* 1 000 *or* 0.01)

(9) The volume of a cube of edge length 3 cm. = ..... $cm^3$

(8 *or* 27 *or* 64 *or* 125)

(10) If a : b = 2 : 3 and b : c = 3 : 5 , then a : c = ..... : .....

(2 : 5 *or* 3 : 5 *or* 5 : 2 *or* 5 : 3)

(11) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 and the weight of Ahmed is 60 kg. , then the weight of Hani = ..... kg.

(40 *or* 50 *or* 60 *or* 10)

(12) The opposite data are quantitative data except .....

(weight *or* age *or* temperature degrees *or* blood species)

Final Examinations

## 2 Complete the following :

(13) The proportion is .....

(14) 3 000 gm. : 5 kg. = ..... : ..... (in the simplest form)

(15) If the drawing scale < 1 , then this expresses .....

(16) The following figure in this pattern  is .....

(17) The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. = ..... $cm^3$

(18) If the percentage of the number of girls in a class which mixed is 67 % , then the percentage of the number of boys in this class = .....

(19) A computer colour printer prints 12 papers each 4 minutes , then the rate of work of this printer = ..... papers/minutes

(20) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

## 3 Answer the following :

(21) A primary school has 540 pupils. If the ratio between the number of boys to the number of girls is 4 : 5 , calculate the number of each boys and girls.

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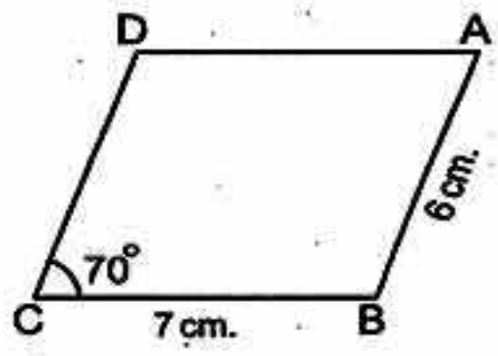
**(22) In the opposite figure :**

ABCD is a parallelogram in which AB = 6 cm. , BC = 7 cm. and m (∠ C) = 70°

Find :

**[a]** m (∠ D) = .....

**[b]** AD = ..... cm.




(23) A company for selling the electric sets. It shows TV set for L.E. 2 100 , if the percentage of the profit is 12 % Find the buying price of TV set.

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Final Examinations

**(24)** A container has 12 litres of honey. It is wanted to put them in smaller bottles , the capacity of each of them is 400 $cm^3$. Calculate the number of bottles which is needed for that.

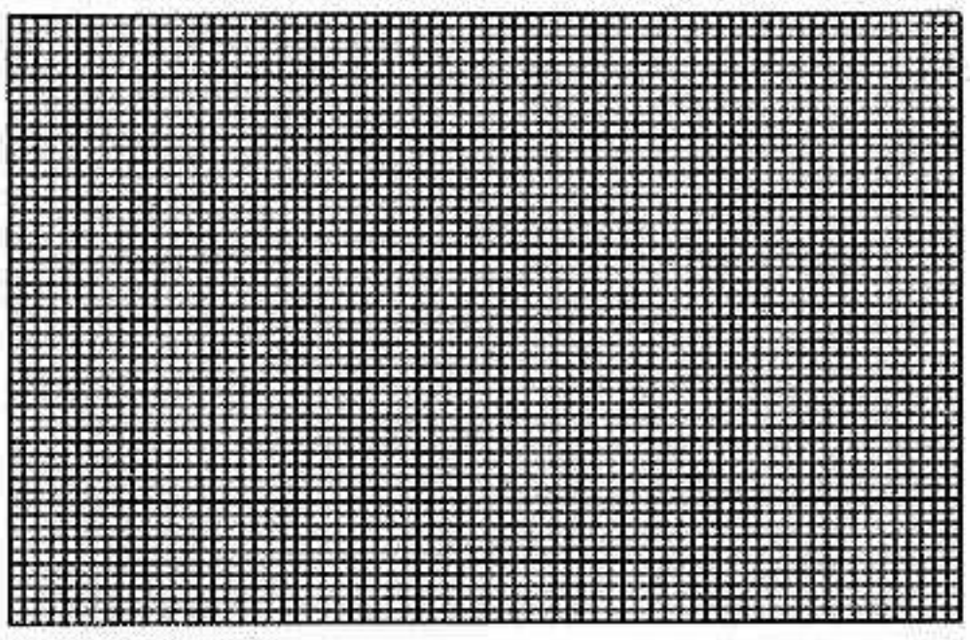
.....

.....

**(25) The following table shows the marks of students in one month in math :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Numbers of students | 5 | 15 | 20 | 10 | 50 |

Represent these data using the frequency curve.



## 15 El-Menia Governorate

El-Menia Educational Zone
Kafr El-Mansorah Formal Languages Primary School

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** If 3 a = 4 b , then , $\frac{a}{b}$ = ..... ( $\frac{3}{4}$ *or* $\frac{2}{3}$ *or* $\frac{4}{3}$ *or* $\frac{3}{2}$ )

**( 2 )** If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 *or* 18 *or* 20 *or* 22 )

**( 3 )** 300 grams : $1\frac{1}{2}$ kilogram = ..... : .....

( 1 : 3 *or* 1 : 5 *or* 10 : 1 *or* 10 : 30 )

**( 4 )** 1 – (35 % + 25 %) = ..... ( $\frac{1}{2}$ *or* $\frac{1}{3}$ *or* $\frac{2}{5}$ *or* $\frac{3}{4}$ )

**( 5 )** The ratio between the circumference of the circle and its diameter length is ..... ( $\frac{\pi}{2}$ *or* $\pi$ *or* $\frac{1}{\pi}$ *or* $2\pi$ )

**( 6 )** 300 $cm^3$ + 3.7 litres = ..... litres ( 6.7 *or* 4 *or* 3.6 *or* 303.7 )

**( 7 )** An agricultural machine ploughs 6 feddans in 3 hours, then the rate of performance of the machine is ..... feddans/hour

( 2 *or* 15 *or* 3 *or* 25 )

Final Examinations

(8) $\frac{1}{6}$ : $3\frac{1}{3}$ in the simplest form is .....

( 1 : 20 *or* 2 : 15 *or* 2 : 5 *or* 1 : 5 )

(9) If the volume of a cuboid = 40 $cm^3$ , and its height = 4 cm. , then the area of its base = ..... ( 10 cm. *or* 10 $cm^2$ *or* 160 $cm^2$ *or* 160 cm. )

(10) The sum of measure of two consecutive angles in a parallelogram = .....

( 60° *or* 90° *or* 180° *or* 360° )

(11) The two diagonals are equal in length and not perpendicular in .....

( rectangle *or* rhombus *or* triangle *or* square )

(12) The following data are descriptive except .....

( favourite colour *or* age *or* birth place *or* name )

## 2 Complete the following statements :

(1) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

(2) $\frac{3}{10}$ = ..... %

(3) The ratio between 3 feddans : 40 kirats = ..... : .....

(4) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : ..... (in the simplest form)

(5) 39 days ≃ ..... week. (to the nearest week)

(6) The sum of all edges of a cube is 24 cm. , then its volume = ..... $cm^3$

(7) △○△△○○△△△ ..... (in the same pattern)

(8) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

## 3 Answer the following questions :

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit
Calculate the selling price.

.....

.....

.....

(2) If the ratio among the measures of the angles of a triangle is 2 : 3 : 4
Find the measure of the greatest angle in this triangle.

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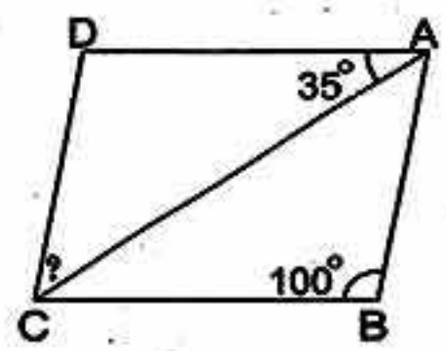
Final Examinations

**( 3 ) In the opposite figure :**

ABCD is a parallelogram in which , m (∠ B) = 100° , m (∠ DAC) = 35°

Find : m (∠ ACD)

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**( 4 ) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.**

**Calculate the price of honey , given that the price of one litre is L.E. 20**

.....

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**( 5 ) The following table shows the marks of 100 students in one month in math test :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

Draw the frequency curve of this distribution.



**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 ) If a : b = 2 : 3 , b : c = 6 : 7 , then a : c = .....**

( 7 : 4 *or* 4 : 7 *or* 12 : 7 *or* 6 : 7 )

## Final Examinations

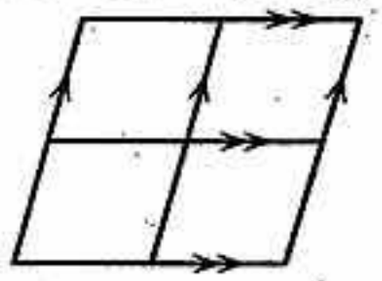
(2) The range of the values 7 , 3 , 6 , 15 and 10 is .....
( 4 **or** 7 **or** 12 **or** 15 )

(3) If $\frac{x}{9} = \frac{4}{3}$ , then $x + 2$ = .....
( 12 **or** 14 **or** 16 **or** 20 )

(4) 1 – (35 % + 25 %) = .....
( $\frac{1}{2}$ **or** $\frac{1}{3}$ **or** $\frac{2}{5}$ **or** $\frac{3}{4}$ )

(5) The ratio between 3 feddans : 24 kirats = .....
( 3 : 2 **or** 3 : 1 **or** 1 : 8 **or** 1 : 4 )

(6) The number of parallelograms in the opposite figure is .....
( 9 **or** 7 **or** 5 **or** 4 )



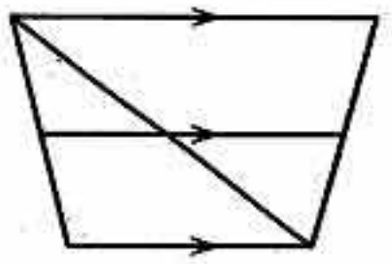
(7) If the volume of a cuboid = 300 $cm^3$ , its base area = 25 $cm^2$ , then its height = ..... cm.
( 12 **or** 13 **or** 14 **or** 15 )

(8) 250 gm. : $\frac{1}{2}$ kg. = .....
( 2 : 1 **or** 1 : 2 **or** 1 : 5 **or** 5 : 1 )

(9) A cube of volume 125 $cm^3$ , then the area of its base = .....
( 25 $cm^2$ **or** 25 cm. **or** 5 $cm^2$ **or** 5 cm. )

(10) The following data are descriptive except the .....
( favourite colour **or** birth place **or** age **or** blood species )

(11) **In the opposite figure :**
The number of trapezoids is .....
( 2 **or** 4 **or** 3 **or** 5 )



(12) 23 $cm^3$ = ..... litres.
( 0.23 **or** 2 300 **or** 0.023 **or** 230 )

## 2 Complete each of the following :

(1) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2}$ = ..... : ..... : ..... (in the simplest form)

(2) If the drawing scale > 1 , then this expresses .....

(3) △○△△○○△△△ ..... (in the same pattern)

(4) The difference between the maximum value and the minimum value is called .....

(5) The number of edges of a cube = ..... edges.

(6) Area of the square = side length × .....

(7) 300 $mm^3$ = ..... $cm^3$

(8) From the properties of the proportion , the product of the extremes = the product of the .....

**3 Answer the following questions :**

**( 1 )** A metallic cube of edge length 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensiona 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

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**( 2 )** The ratio among the lengths of the sides of a triangle is 2 : 3 : 4 and the preimeter of the triangle = 36 cm.
Calculate the length of each side of the triangle.

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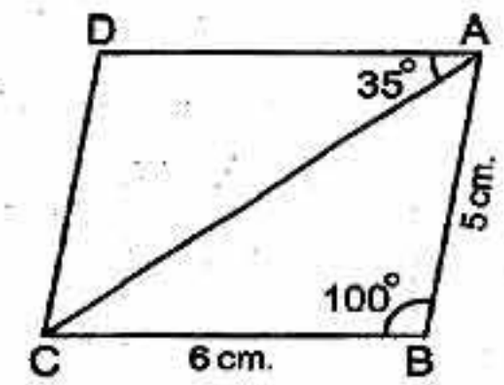
**( 3 ) In the opposite figure :**

ABCD is a parallelogram in which

AB = 5 cm. , BC = 6 cm. m (∠ B) = 100°

and m (∠ DAC) = 35° , without using measuring tools , find :




**[a]** m (∠ D) = .....°

**[b]** m (∠ ACD) = .....°

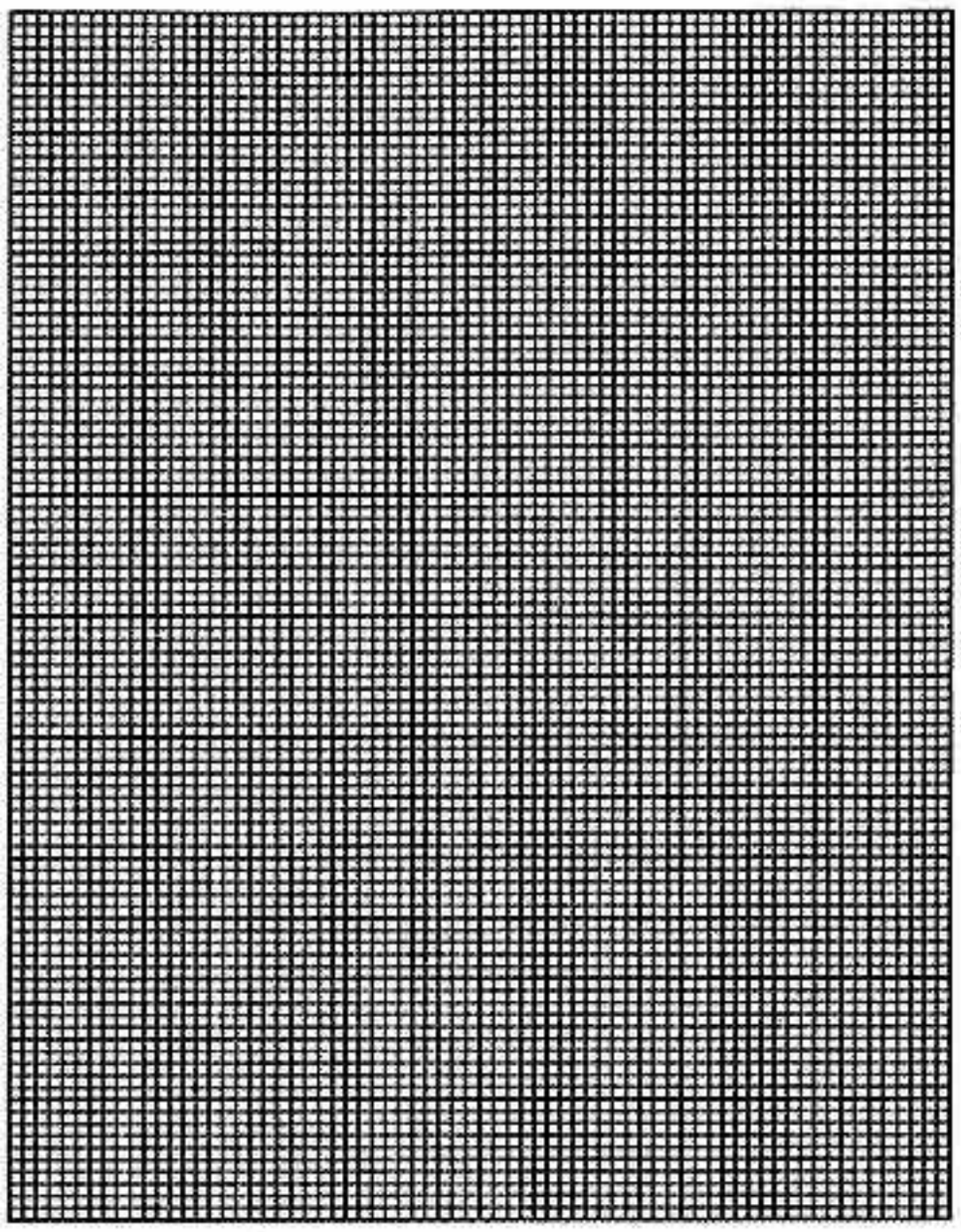
**[c]** The perimeter of the parallelogram ABCD = ..... cm.

**( 4 ) The following table shows the ages of visitors to a museum during a certain period :**

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Frequency | 7 | 10 | 15 | 20 | 13 | 65 |

Draw the frequency curve for this distribution.

Final Examinations



17 Qena Governorate — Maths Supervision

**Answer the following questions :**

**1 Complete each of the following :**

( 1 ) 30 days ≃ ..... weeks. (to the nearest week)

( 2 ) $1\frac{3}{4}$ = ..... %

( 3 ) If the volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then the height = ..... cm.

( 4 ) If $x$ , 18 , 6 and 9 are proportional quantities , then $x$ = .....

( 5 ) If a : b = 2 : 3 and b : c = 3 : 5 , then a : c = .....

( 6 ) If the marks of 6 pupils in one test are 29 , 33 , 57 , 40 , 36 , 49 , then the range of these marks = .....

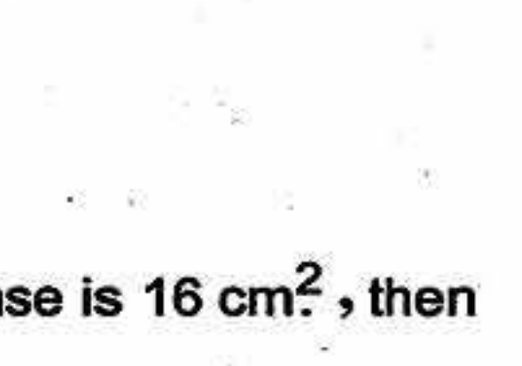
( 7 ) **In the opposite figure :**

XYZL is a parallelogram in which

m (∠ Y) = 118° and m (∠ YXZ) = 27° , then :

[a] m (∠ L) = .....°

[b] m (∠ LXZ) = .....°




( 8 ) The area of the triangle = $\frac{1}{2}$ × ..... × .....

## 2 Choose the correct answer from those given :

( 9 ) The opposite data are descriptive except .....
( The favorite colour *or* birthday *or* age *or* blood species )

(10) 4.6 litres = ..... mL. ( 46 *or* 460 *or* 4 600 *or* 46 000 )

(11) $\frac{2}{3} : 3\frac{1}{3}$ = ..... : ..... ( 1 : 2 *or* 2 : 5 *or* 1 : 10 *or* 1 : 5 )

(12) The volume of the cuboid whose dimensions are 2 cm. , 3 cm. , 5 cm.
= ..... $cm^3$ ( 10 *or* 25 *or* 30 *or* 50 )

(13) The centimetre cube is a unit for measuring .....
( the perimeter *or* the area *or* the volume *or* the length )

(14) If one of the angles of a parallelogram is right and two of its adjacent sides are equal in length , then it is called .....
( rhombus *or* square *or* triangle *or* rectangle )

(15) The drawing scale = $\frac{\text{.....}}{\text{.....}}$
( $\frac{\text{length in reality}}{\text{length in drawing}}$ *or* $\frac{1}{\text{length in reality}}$ *or* $\frac{\text{length in drawing}}{\text{length in reality}}$ *or* $\frac{1}{2}$ )

(16) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans = ..... hours. ( 4 *or* 6 *or* 7 *or* 8 )

(17) $\frac{3}{4}$ = ..... (as a decimal fraction) ( 0.2 *or* 0.5 *or* 0.25 *or* 0.75 )

(18) 45 % = ..... (as a fraction in the simplest form)
( $\frac{45}{1\,000}$ *or* $\frac{9}{20}$ *or* $\frac{4}{10}$ *or* $\frac{5}{100}$ )

(19) The ratio between 12 kirats and 2 feddans = ..... : .....
( 1 : 4 *or* 4 : 1 *or* 1 : 6 *or* 6 : 1 )

(20) If a man distributed L.E. 200 among his three sons in the ratio 2 : 3 : 5 , then the share of the third = L.E. .....
( 50 *or* 100 *or* 150 *or* 75 )

## 3 Answer the following :

(21) A cube of metal its edge length is 12 cm. If it is wanted to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. , and 6 cm. Calculate the number of alloys that can be obtained.

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Final Examinations

(22) Ahmed draw a picture of his brother Osama with a drawing scale 1 : 40
If the real height of Osama is 160 cm. What is height in the picture ?

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(23) A triangular garden in a school , the ratio between its side lengths is 3 : 4 : 5 , if the perimeter of the garden is 120 metres , calculate the length of each of the sides of the garden.

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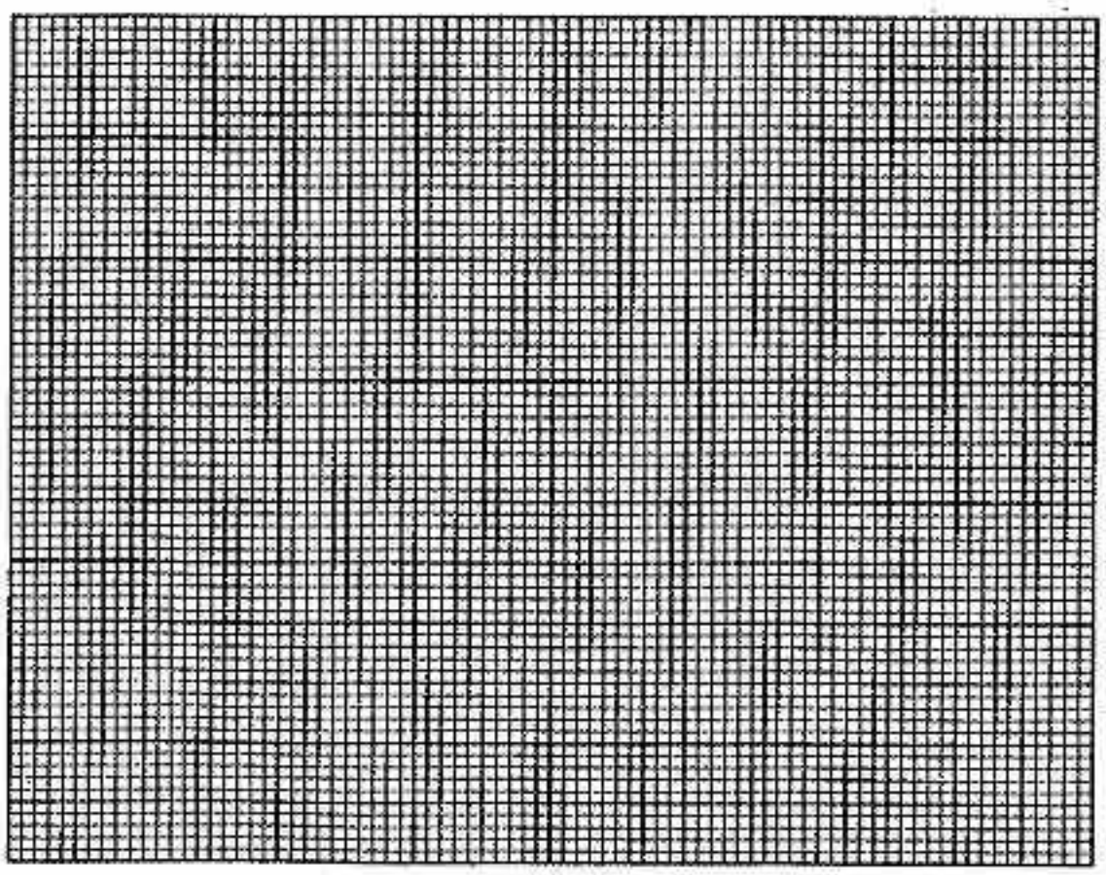
**(24) The following table shows the extra money which 100 workers got in a month in a factory :**

| The extra money | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – | Total |
|---|---|---|---|---|---|---|---|
| Number of workers | 20 | 15 | 30 | 20 | 10 | 5 | 100 |

**[a]** Draw the frequency curve of this distribution.

**[b]** What is the number of workers who obtained extra money less than 50 pounds ?

.....



Final Examinations

## 18 Luxor Governorate

Luxor Educational Directorate
Maths Department

محافظة الأقصر

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) Parallelogram is a rectangle if one of its angles is .....
( right *or* acute *or* obtuse *or* straight )

( 2 ) The ratio between the side length of the square to its perimeter is ..... : .....
( 1 : 5 *or* 1 : 3 *or* 1 : 4 *or* 4 : 1 )

( 3 ) A car covers 240 km. in 3 hours , then the car speed is ..... km./hour
( 60 *or* 80 *or* 120 *or* 90 )

( 4 ) The simplest form of the ratio 2.4 : 18 = ..... : .....
( 2 : 15 *or* 1 : 6 *or* 6 : 7 *or* 5 : 3 )

( 5 ) In the proportion 6 , 8 , 3 , $x$ , the value of $x$ is .....
( 5 *or* 7 *or* 4 *or* 3 )

( 6 ) All of the following are considered descriptive data except .....
( name *or* age *or* address *or* hobbies )

( 7 ) 16 000 $cm^3$ = ..... litres. ( 1.6 *or* 16 *or* 160 *or* 0.16 )

( 8 ) $\frac{2}{5}$ = ..... % ( 20 *or* 40 *or* 60 *or* 10 )

( 9 ) If a : b = 2 : 3 and b : c = 5 : 6 , then a : c = ..... : .....
( 5 : 9 *or* 9 : 7 *or* 5 : 8 *or* 15 : 11 )

(10) The sum of all edge lengths of a cube is 84 cm. , then its volume is ..... $cm^3$ ( 49 *or* 343 *or* 28 *or* 14 )

(11) 15 % of 400 = ..... ( 40 *or* 70 *or* 80 *or* 60 )

(12) 2 kg. : 3 500 gm. = ..... : ..... ( 2 : 3 *or* 7 : 6 *or* 4 : 7 *or* 5 : 4 )

**2 Complete the following :**

( 1 ) The range of the set of values 7 , 3 , 8 , 9 and 5 is .....

( 2 ) Diagonals are equal in length in each of ..... and .....

( 3 ) If the drawing length is 3 cm. and the real length is 18 m. , then the drawing scale is ..... : .....

( 4 ) The volume of a cuboid is 720 $cm^3$ , and its height is 9 cm. , then its base area is ..... $cm^2$

( 5 ) If the buying price of some goods is L.E. 2 000 and it sold for L.E. 1 800 , then the percentage of loss is ..... %

Final Examinations

( 6 ) If $\frac{2}{5} = \frac{8}{x}$ , then $x$ = .....

( 7 ) 1 – 70 % = ..... %

( 8 ) The simplest form of the ratio 12 : 18 : 36 = ..... : ..... : .....

## 3 Answer the following :

( 1 ) The ratio between Mina's age and Ahmed's age is 7 : 11 , and the difference between their ages is 8 years , find the age of each of them.

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( 2 ) A picture of a tree is drawn with a drawing scale 1 : 100 , if the real height of the tree is 8 m. , find its length in the picture.

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( 3 ) A swimming pool is in the shape of cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. , find its capacity in litre.

.....

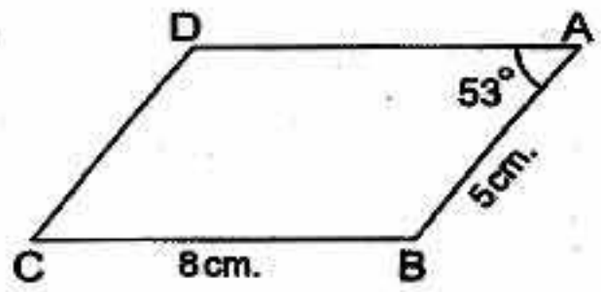
.....

( 4 ) **In the opposite figure :**

ABCD is a parallelogram in which AB = 5 cm. , BC = 8 cm. and (∠ A) = 53° Find :

[a] m (∠ B)

[b] The length of $\overline{AD}$ and the length of $\overline{DC}$

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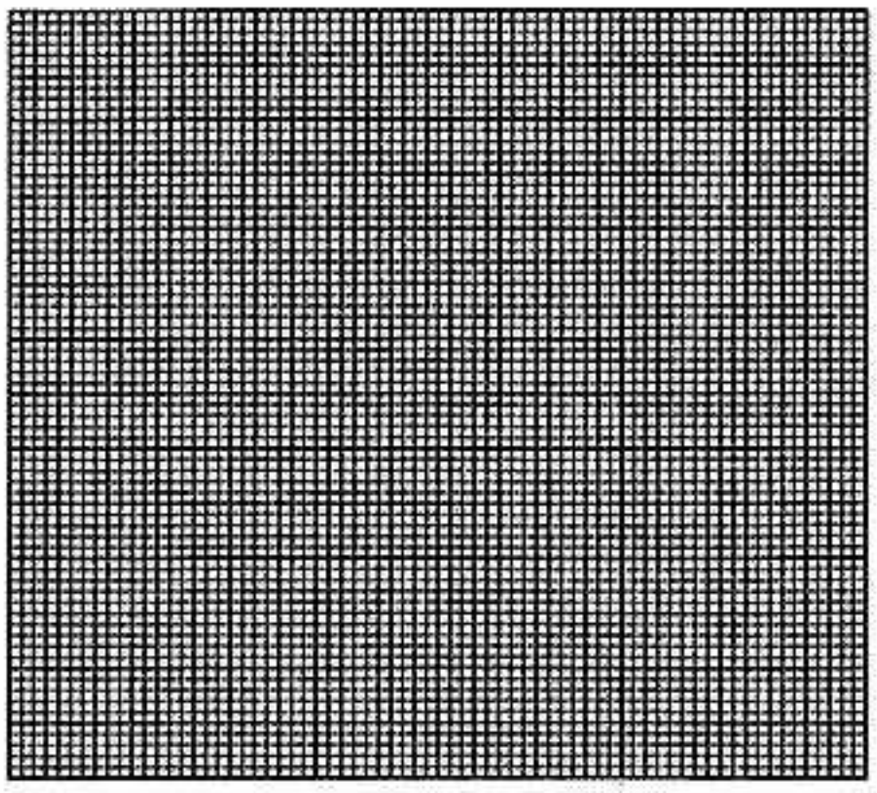
( 5 ) **The following table shows the ages of visitors to an exhibition within an hour of a day :**

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

Draw the frequency curve for this distribution.

Final Examinations



## 19 Aswan Governorate

Aswan Educational Directorate
Eng. M.M. Yacoub Formal Language School

**Answer the following questions :**

**1 Choose the correct answer of the following :**

( 1 ) The following data are quantitative except .....
( age *or* weight *or* name )

( 2 ) If the sum of the edge lengths of a cube is 36 cm. , then its volume = ..... $cm^3$
( 3 *or* 27 *or* 12 )

( 3 ) If a : b = 2 : 3 , b : c = 6 : 7 , then a : c = .....
( 7 : 4 *or* 12 : 7 *or* 4 : 7 )

( 4 ) 12 $dm^3$ = ..... $cm^3$
( 1 200 *or* 12 000 *or* 120 )

( 5 ) $\frac{2}{3} : 3\frac{1}{3}$ = ..... : .....
( 1 : 5 *or* 2 : 3 *or* 2 : 5 )

( 6 ) If one angle of a parallelogram is right , then it called a .....
( rectangle *or* square *or* rhombus )

( 7 ) $1\frac{3}{4}$ = ..... %
( 75 *or* 175 *or* 25 )

( 8 ) An agricultural tractor ploughs 28 feddans in 4 hours , the time that needed to plough 42 feddans is ..... hours.
( 4 *or* 12 *or* 6 )

( 9 ) If $\frac{x}{18} = \frac{4}{6}$ , then $x + 1$ = .....
( 13 *or* 11 *or* 12 )

(10) If length of an insect in a picture is 40 cm. , and the real length is 2 mm. , then the drawing scale is .....
( 200 : 1 *or* 20 : 1 *or* 1 : 200 )

(11) If a car covered 280 km. in 4 hours , then the rate of covered distance per hour = ..... km./hr.
( 7 *or* 70 *or* 700 )

(12) Two wires , the ratio between their lengths is 3 : 4 and their sum is 140 cm. , then the length of the second wire is ..... cm.
( 30 *or* 40 *or* 80 )

Final Examinations

**2 Complete each of the following :**

( 1 ) The following figure in this pattern  is .....

( 2 ) Drawing scale = $\frac{\text{.....}}{\text{.....}}$

( 3 ) If the volume of a cuboid is 560 $cm^3$ and its height is 8 cm. , then its base area is ..... $cm^2$

( 4 ) If the marks of 5 pupils in a test are 36 , 40 , 57 , 29 and 33 , then the range of marks is .....

( 5 ) 1 – (25 % + 30 %) = ..... %

( 6 ) 80 minutes : 2 hours = ..... : ..... (in the simplest form)

( 7 ) A map is drawn with a scale 1 : 200 000 , if the distance between two cities is 8 km. in reality , then the length between them on that map is .....

( 8 ) The ratio between length of side of an equilateral triangle and its perimeter = ..... : .....

**3 Answer the following :**

( 1 ) Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year the profit was L.E. 3 900 Calculate the share of each of them from profit.

.....

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( 2 ) A container has 16 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is 400 $cm^3$ Calculate the number of bottles.

.....

.....

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( 3 ) If buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

.....

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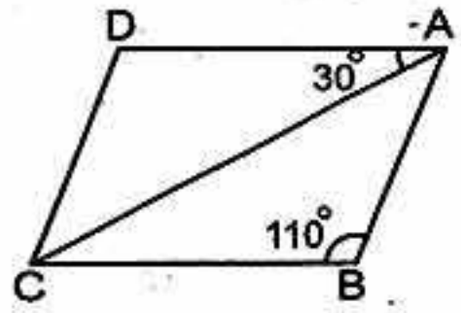
## Final Examinations

**( 4 ) In the opposite figure :**

ABCD is a parallelogram , then find :

**[a]** m (∠ D) = ..... °

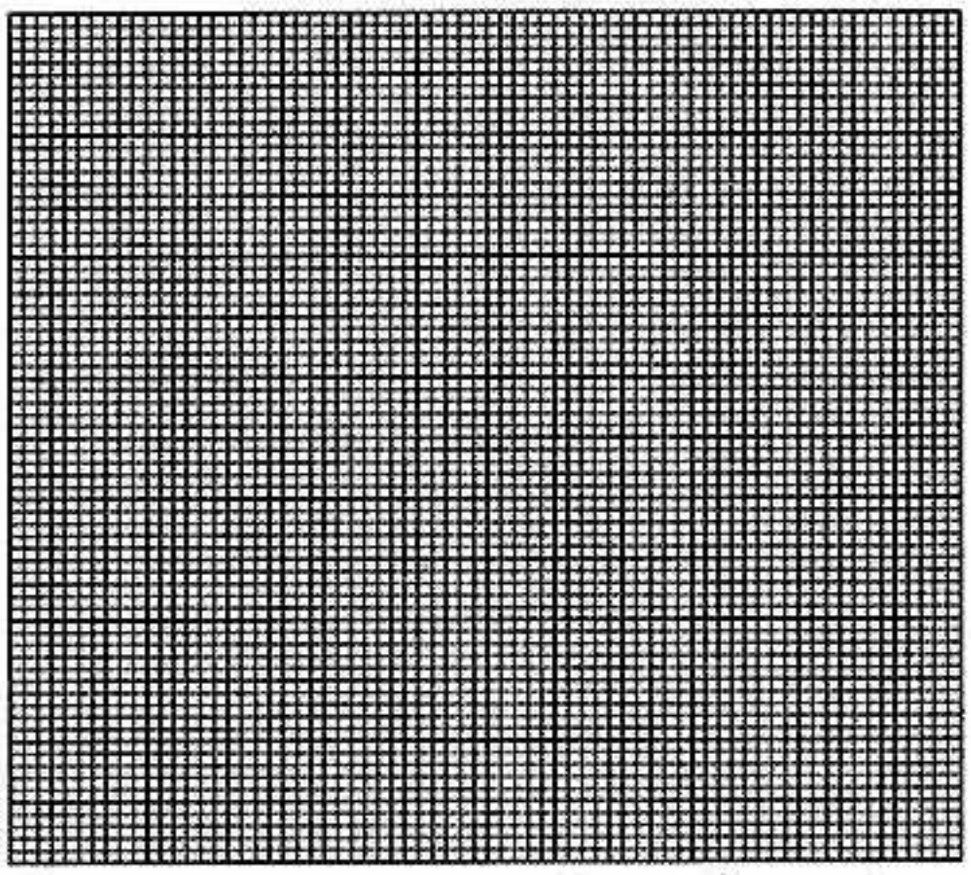
**[b]** m (∠ ACD) = ..... °




**( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 12 | 11 | 40 |

Represent these data using the frequency curve.



## 20 South Sinai Governorate

El-Tur Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

**( 1 )** If 2 , 5 , $x$ and 15 are proportional , then $x$ = .....

( 2 **or** 5 **or** 6 **or** 15 )

**( 2 )** The percentage is a ratio its second term is .....

( 10 **or** 100 **or** 1 000 **or** 10 000 )

**( 3 )** 3 litres = ..... $cm^3$ ( 3 **or** 30 **or** 300 **or** 3 000 )

**( 4 )** If the ratio between a child's age to his father's age is 2 : 13 and the child's age is 6 years , then father's age = ..... years.

( 6 **or** 15 **or** 39 **or** 41 )

Final Examinations

( 5 ) The ratio between the two numbers 1.6 and 1.8 = ..... : .....
( 1 : 4 *or* 8 : 9 *or* 3 : 8 *or* 1 : 16 )

( 6 ) The number of edges of the cube ..... the number of faces of the cuboid.
( > *or* < *or* = *or* ≤ )

( 7 ) A merchant bought a TV set for L.E. 1 800 and he sold it for L.E. 2 000 , then his profit = L.E. .....
( 1 800 *or* 800 *or* 200 *or* 3 800 )

( 8 ) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
( 4 *or* 2 *or* 6 *or* 12 )

( 9 ) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale = ..... : ..... ( 1 : 10 *or* 1 : 100 *or* 1 : 1 000 *or* 1 : 6 )

(10) Antecedent of the ratio 3 : 11 is ..... ( 3 *or* 5 *or* 11 *or* 2 )

(11) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of performance = ..... feddans / hour ( 4 *or* 6 *or* 7 *or* 8 )

(12) If one of the angles of a parallelogram is right angle , then it is called .....
( a square *or* a rectangle *or* a rhombus *or* a triangle )

## 2 Complete :

( 1 ) $\frac{3}{4}$ = ..... %

( 2 ) The ratio between the side length of the square and its perimeter = ..... : .....

( 3 ) If the volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

( 4 ) 250 grams : $\frac{1}{2}$ kilogram = ..... : ..... (in the simplest form)

( 5 ) If the drawing scale < 1 , this expresses .....

( 6 ) If a : b = 2 : 3 , b : c = 3 : 5 , then a : c = ..... : .....

( 7 ) 4 $m^3$ = ..... $dm^3$

( 8 ) The data : the age , the length , the weight and the favorite color are quantitative data except .....

## 3 Answer the following :

( 1 ) Nahed bought an automatic washing for L.E. 3 600 and the discount was 10 % Calculate the original price of the washing machine before discount.

.....

.....

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Final Examinations

**( 2 )** The ratio among the measures of the angles of a triangle is 2 : 3 : 4
Find the measure of each angle in the triangle.

.....

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**( 3 )** A vessel in the shape of a cube with edge length 15 cm. is filled with honey.
Calculate the capcity of the vessel of the honey.

.....

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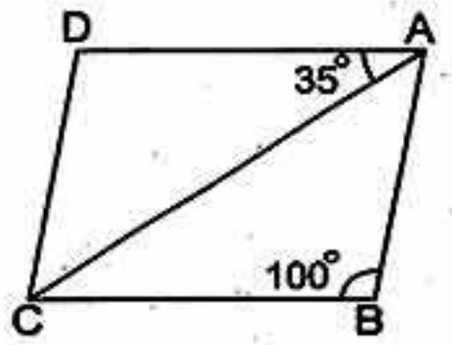
**( 4 ) In the opposite figure :**
ABCD is a parallelogram , find :
**[a]** m (∠ BAC) = .....°
**[b]** m (∠ D) = .....°




**( 5 ) The following table shows the marks of 100 students in one maths test :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

**Draw the frequency curve of this distribution.**

## 1 Cairo Governorate

Heliopolis Educational Directorate
Patriarchal College Heliopolis

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{2}{3} : 2\frac{2}{3}$ = ..... (1 : 2 *or* 1 : 3 *or* 1 : 4 *or* 1 : 8)

(2) If $\frac{x+4}{2} = 5$ , then $x$ = ..... (2.5 *or* 6 *or* 10 *or* 14)

(3) 500 $dm^3$ = ..... litre. (0.5 *or* 50 *or* 500 *or* 500 000)

(4) The range of the values 5 , 4 , 8 , 12 , 7 is .....
(4 *or* 5 *or* 7 *or* 8)

(5) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ = ..... (2 : 3 : 4 *or* 4 : 3 : 2 *or* 6 : 4 : 3 *or* 6 : 3 : 4)

(6) If the length in drawing is 2 cm. and the real length is 20 metres , then the drawing scale is 1 : ..... (10 *or* 100 *or* 1 000 *or* 10 000)

(7) If a is half b , and b is twice c , then a : c = .....
(1 : 1 *or* 1 : 2 *or* 1 : 4 *or* 2 : 1)

(8) 6 hours : 1 day = ..... (1 : 10 *or* 1 : 4 *or* 6 : 1 *or* 4 : 1)

(9) If 20 % of a number is 80 , then the number = .....
(16 *or* 40 *or* 400 *or* 1 600)

(10) The opposite data are quantitative except the .....
(tallness *or* weight *or* favorite colour *or* age)

(11) The base area of a cuboid is 12 $cm^2$ and its volume is 6 $cm^3$ , then its height is ..... cm.
(2 *or* 6 *or* 72 *or* $\frac{1}{2}$)

(12) If the sum of the edges lengths of a cube is 12 cm. , then its volume = ..... $cm^3$
(1 *or* 27 *or* 64 *or* 1 728)

(13) If a man drinks 3.5 litres of juice weekly , then the rate of what he drinks daily is ..... litre/day
(3.5 *or* $\frac{1}{2}$ *or* 2 *or* 3 500)

**2 Complete :**

(1) 250 gm. : $\frac{1}{2}$ kg. in the simplest form = .....

(2) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is ..... hours.

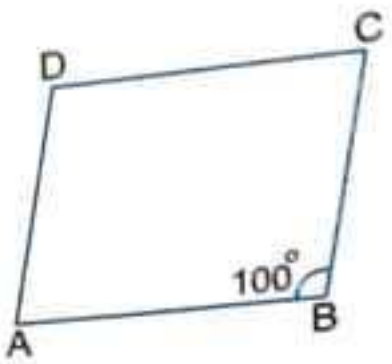
( 3 ) The percentage is a ratio whose second term is .....

( 4 ) If we distribute 300 pounds between two persons , and the first share is $\frac{1}{2}$ the second share , then the share of the first is ..... pounds.

( 5 ) If 2 , $x$ , 6 , 9 are proportional , then $x$ = .....

( 6 ) **In the opposite figure :**

ABCD is a parallelogram , m (∠ B) = 100° , then :




[a] m (∠ A) = .....°

[b] The ratio between m (∠ B) and m (∠ C) = ..... (in the simplest form).

[c] If AB + BC = 10 cm. , then the perimeter of the parallelogram ABCD = ..... cm.

[d] If AB = BC , then the figure ABCD is a called a .....

## 3 Answer the following questions :

( 1 ) Mariam bought a TV set for 1 800 pounds after a discount of 10 %
Calculate the price of the TV before the discount.

.....

.....

.....

.....

( 2 ) A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

.....

.....

( 3 ) A map is drawn with a scale 1 : 600 000 , if the distance between two cities on this map is 4 cm. , find the real distance between the two cities in kilometres.

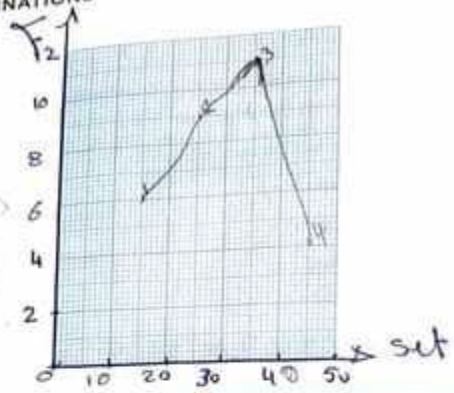
.....

.....

( 4 ) **The following table shows the marks of 30 pupils in an exam :**

| **Marks** | 10 – | 20 – | 30 – | 40 – | **Total** |
|---|---|---|---|---|---|
| **Number of pupils** | 6 | 9 | 11 | 4 | **30** |

Draw the frequency curve representing this distribution.




## 2 Cairo Governorate

Nasr City Educational Directorate
Al-Ola Language Modern Schools

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ kg. : 700 gm. = ..... (2 : 7 or 5 : 7 or 7 : 5 or 50 : 7)

(2) If one angle of a parallelogram is right , then it is called a .....
(trapezium or rhombus or cube or rectangle)

(3) 25 % from 200 = ..... (20 or 40 or 50 or 100)

(4) If a : b = 5 : 6 and b : c = 3 : 4 , then a : c = 5 : .....
(7 or 8 or 6 or 9)

(5) If the drawing length is 7 cm. and the real length is 28 metres , then drawing scale = ..... (1 : 4 or 1 : 400 or 400 : 1 or 1 : 40)

(6) The ratio between three numbers is 3 : 4 : 7 and their sum is 70 , then the greatest number = ..... (15 or 35 or 20 or 14)

(7) If $\frac{x-1}{10} = 0.7$ , then $x$ = ..... (7 or 8 or 10 or 9)

(8) The range of data 7 , 3 , 6 , 9 and 5 is ..... (2 or 4 or 6 or 12)

(9) In a class the percentage of the number of girls is 54 % , then the percentage of the number of boys is ..... % (56 or 64 or 46 or 36)

(10) If the dimensions of cuboid is 3 cm. , 4 cm. and 6 cm. , then its volume = ..... $cm^3$ (40 or 60 or 52 or 72)

(11) $\frac{24}{5}$ = ..... ($4\frac{1}{5}$ or $3\frac{2}{5}$ or $4\frac{4}{5}$ or $2\frac{4}{5}$)

(12) In the proportion , the product of the extremes ..... The product the means.
( < or > or = or ≠ )

(13) The opposite data are descriptive except .....
( favorite colour or place of birth or age or blood species )

## 2 Complete :

(14) 18 kirats : 2 feddans = ..... : ..... (in the simplest form)

(15) The ratio between the measures of angles of triangle is 3 : 4 : 5 , then the measure of the smallest angle is .....°

(16) The quadrilateral which each two opposite sides are parallel and equal in length is .....

(17) 1 – (39 % + 41 %) = ..... %

(18) If the distance between two cities on a map is 3 cm. and the real distance between them is 9 km. , then the drawing scale of the map = ..... : .....

(19) If a car consumes 20 litres of fuel to cover a distance of 180 km. , then the number of litres needed to cover 540 km. is .....

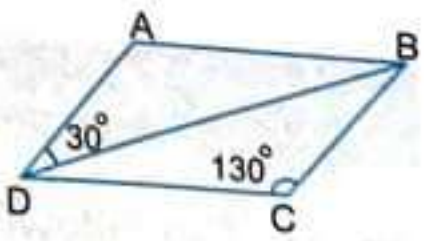
(20) 2.5 L. + 500 $cm^3$ = ..... L.

(21) If the numbers 2 , $x$ , 6 and 9 are proportional , then the value of $x$ = .....

(22) If the perimeter of base of a cube is 16 cm. , then its volume = ..... $cm^3$

## 3 Answer the following :

(23) ABCD is a parallelogram in which m (∠ C) = 130° , m (∠ ADB) = 30°
Find : m (∠ A) and m (∠ ABD)




.....

.....

(24) Ahmed studies 21 hours weekly , find the rate of his studying daily.

.....

.....

(25) Samir bought a refrigerator in the time of sale with price L.E. 7 600 after discount 5 % Find the price of refrigerator before discount.

.....

.....

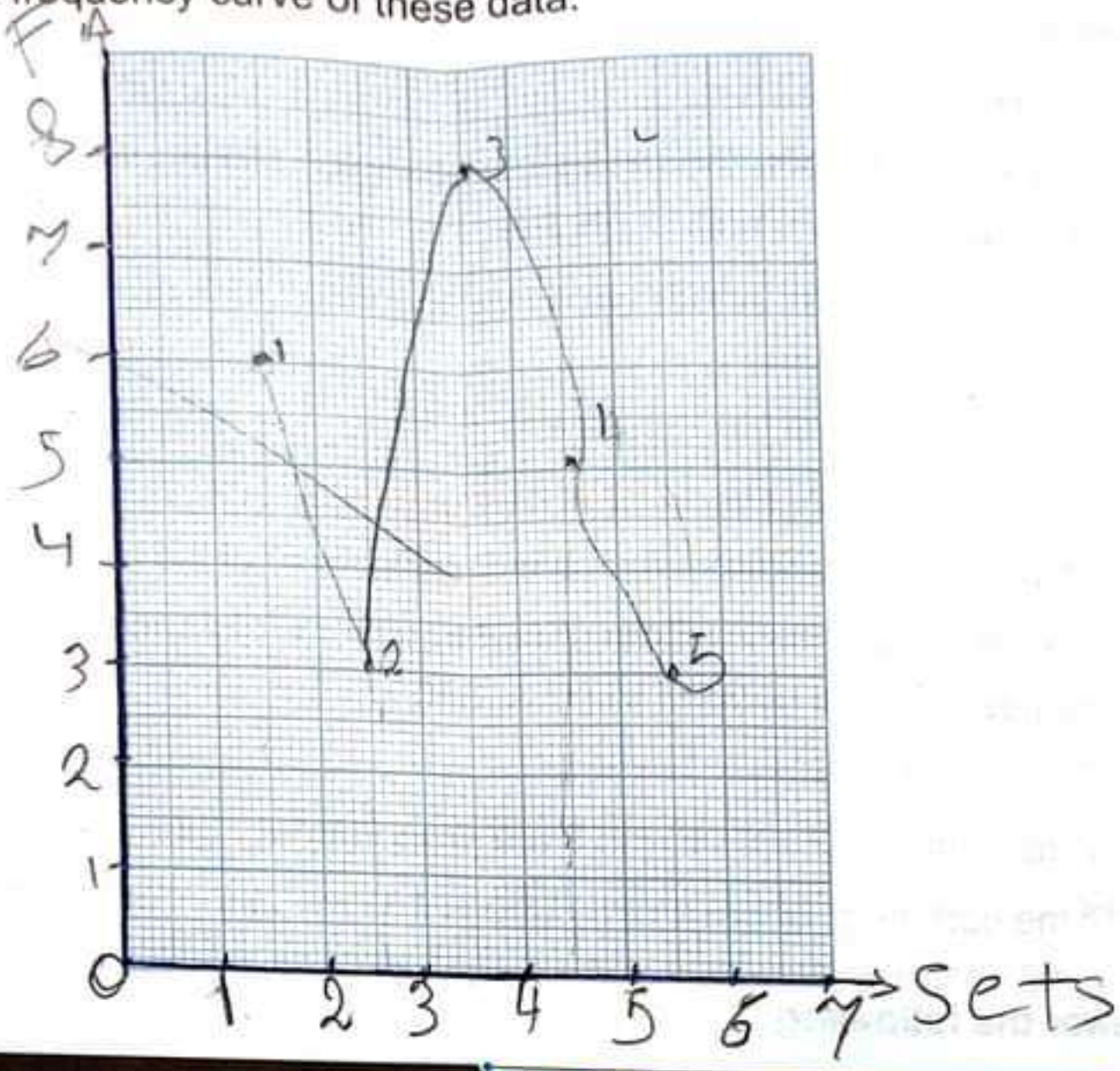
.....

.....

(26) **The following table shows the number of hours which are spent by pupils study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 6 | 3 | 8 | 5 | 3 | 25 |

Draw the frequency curve of these data.




## 3 Giza Governorate

El-Dokki Educational Zone
Orouba Language School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) $\frac{513}{614}$ ..... $\frac{432}{145}$ ( < or > or = or ≥ )

( 2 ) 18 kirats : $1\frac{1}{2}$ feddan = ..... : ..... ( 2 : 1 or 1 : 3 or 1 : 4 or 1 : 2 )

( 3 ) If the numbers 2 , $x$ , 8 and 20 are proportional , then $x$ = ..... ( 4 or 5 or 6 or 22 )

( 4 ) All angles of a rectangle are equal in measure and the measure of each of them = ..... ( 45° or 90° or 110° or 180° )

( 5 ) If the ratio between the weight of Ali and the weight of Omar is 3 : 4 and if the weight of Ali is 30 kg. , then the weight of Omar = ..... kg. ( 7 or 70 or 40 or 35 )

(6) $300\ mm^3$ = ..... $cm^3$. ( 0.3 **or** 3 **or** 30 **or** 3 000 )

(7) The following data are descriptive data except .....
( favorite colour **or** birth place **or** age **or** blood species )

(8) In a class the percentage of girls was 46 % from the total numbers of pupils , then the percentage of boys = ..... % ( 46 **or** 100 **or** 54 **or** 146 )

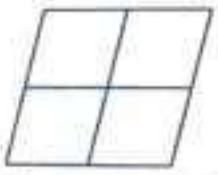
(9) If the real distance between two cities is 9 km. and the distance between them on a map is 3 cm. , then the drawing scale = ..... : .....
( 1 : 3 **or** 1 : 300 **or** 1 : 300 000 **or** 300 000 : 1 )

(10) If A : B = 2 : 3 , B : C = 4 : 5 , then A : C = ..... : .....
( 8 : 15 **or** 15 : 8 **or** 2 : 5 **or** 3 : 5 )

(11) The range of the set of values 35 , 67 , 90 , 48 and 23 is .....
( 12 **or** 67 **or** 113 **or** 58 )

(12) A cube , the area of its base $36\ cm^2$ , then its volume = ..... $cm^3$.
( 6 **or** 72 **or** 216 **or** 108 )

(13) The number of a parallelograms that can be obtained = .....



( 4 **or** 5 **or** 7 **or** 9 )

## 2 Complete :

( 1 ) The proportion is .....

( 2 ) The diagonals are perpendicular and not equal in length in .....

( 3 ) 61 days ≃ ..... weeks.

(4) If $\frac{3}{7} = \frac{x}{35}$ , then $x + 2$ = .....

( 5 ) $\frac{4}{10}$ = ..... %

( 6 ) If a car consumes 20 litres of fuel to cover a distance 250 km. , then rate of consumption of fuel = .....

( 7 ) If the drawing scale > 1 , then this expresses .....

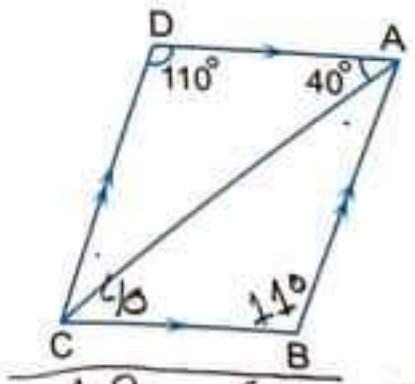
( 8 ) **In the opposite figure :**

ABCD is a parallelogram in which

m (∠ D) = 110° , m (∠ CAD) = 40° , then

m (∠ ACB) = .....

and m (∠ B) = .....




( 9 ) **In the following table :**

| The age | 10 – | 20 – | 30 – | 40 – |
|---|---|---|---|---|
| Number of patients | 6 | 8 | 12 | 9 |

The number of patients less than 30 years = .....

**3** **Answer the following questions :**

**( 1 )** If the ratio between the measures of the angles of a triangle is 1 : 2 : 3 , then find the measure of each angle of the triangle.

.....

.....

.....

.....

**( 2 )** A shopkeeper for electric sets sold a TV set for L.E. 3 180 , if the percentage of his profit is 6 % , then find the buying price and find the profit.

.....

.....

.....

.....

**( 3 )** 10 litres of oil were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the oil in the vessel.

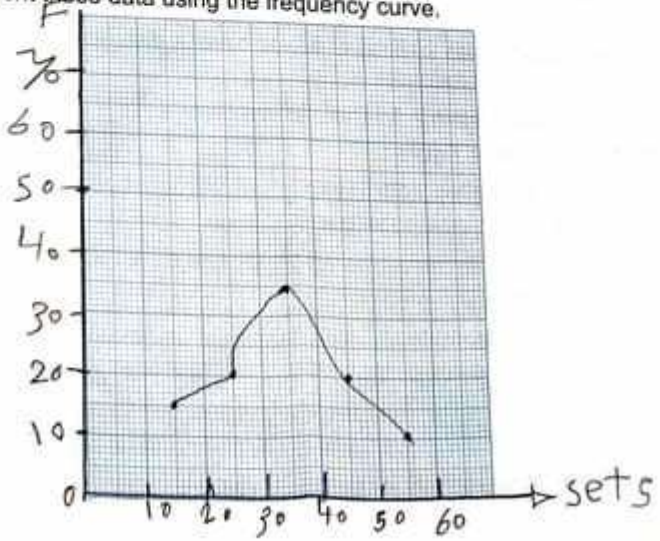
.....

.....

**( 4 )** **The following table shows the extra money which 100 workers got in one month in a factory :**

| The extra money | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of workers | 15 | 20 | 35 | 20 | 10 | 100 |

Represent these data using the frequency curve.



Answer the following questions :

**1 Choose the correct answer :**

(1) From descriptive data .....
(blood species or height or weight or age)

(2) If $\frac{3}{5} = \frac{x}{10}$ , then $x : 12$ = .....
(1 : 2 or 3 : 2 or 1 : 3 or 3 : 5)

(3) 0.35 = ..... %
(3.5 or 0.35 or 35 or 350)

(4) The next shape in the pattern  is .....
( or or or )

(5) The sum of lengths of all edges of a cube is 72 cm. , then its edge length = ..... cm.
(4 or 6 or 8 or 9)

(6) The range of the set of values 22 , 39 , 62 , 54 = .....
(40 or 17 or 15 or 24)

(7) The ratio $\frac{3}{4} : \frac{5}{6}$ = ..... : ..... (in the simplest form)
(3 : 5 or 9 : 10 or 4 : 5 or 1 : 2)

(8) If one angle of a parallelogram is right , then it is called a .....
(rhombus or rectangle or trapezium or square)

(9) If $\frac{A}{B} = \frac{C}{D}$ , then .....
$(A \times D = B \times C)$ or $(A \times B = C \times D)$ or $(A \times C = B \times D)$

(10) A cuboid its base area is 20 $cm^2$ and its height is 6 cm. , then its volume = ..... $cm^3$
(60 or 120 or 720 or 600)

(11) In proportion , the product of the extremes ..... The product of the means.
(> or = or <)

(12) **In the opposite figure :**
ABCD is a square
, then the ratio between
AB : CD = ..... : .....
(1 : 1 or 1 : 2 or 1 : 3 or 2 : 1)


(13) $cm^3$ is the measuring unit of .....
(capacity or volume or area or perimeter)

**2 Complete :**

(1) 18 kirats : 2 feddans = ..... : ..... (in its simplest form)

(2) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

(3) 1 – 75 % = ..... %

(4) A car covers 240 km. in 3 hours , then the rate of what the car covers is ..... km./h.

(5) If the real length of an insect is 2 mm. and its length after enlargement is 4 cm. , then the drawing scale is ..... : .....

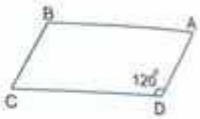
(6) The four angles are right in each of ..... and .....

(7) The number of faces of a cuboid = ..... faces.

(8) **In the opposite figure :**

ABCD is a parallelogram , then

m (∠ C) = .....°




(9) A cube of edge length = 6 cm. , then its volume = ..... $cm^3$.

## 3 Answer the following :

(1) If the ratio between the length of two pieces of cloth is 6 : 8 and the sum of their lengths is 126 cm. , calculate the length of each piece.

.....

.....

.....

.....

(2) The volume of a cuboid is 54 $cm^3$. , its base is square shaped of side length 3 cm. , calculate its height.

.....

.....

.....

(3) A man put 3 000 L.E. in a bank with an interest 10 % Calculate the sum of the money after a year.

.....

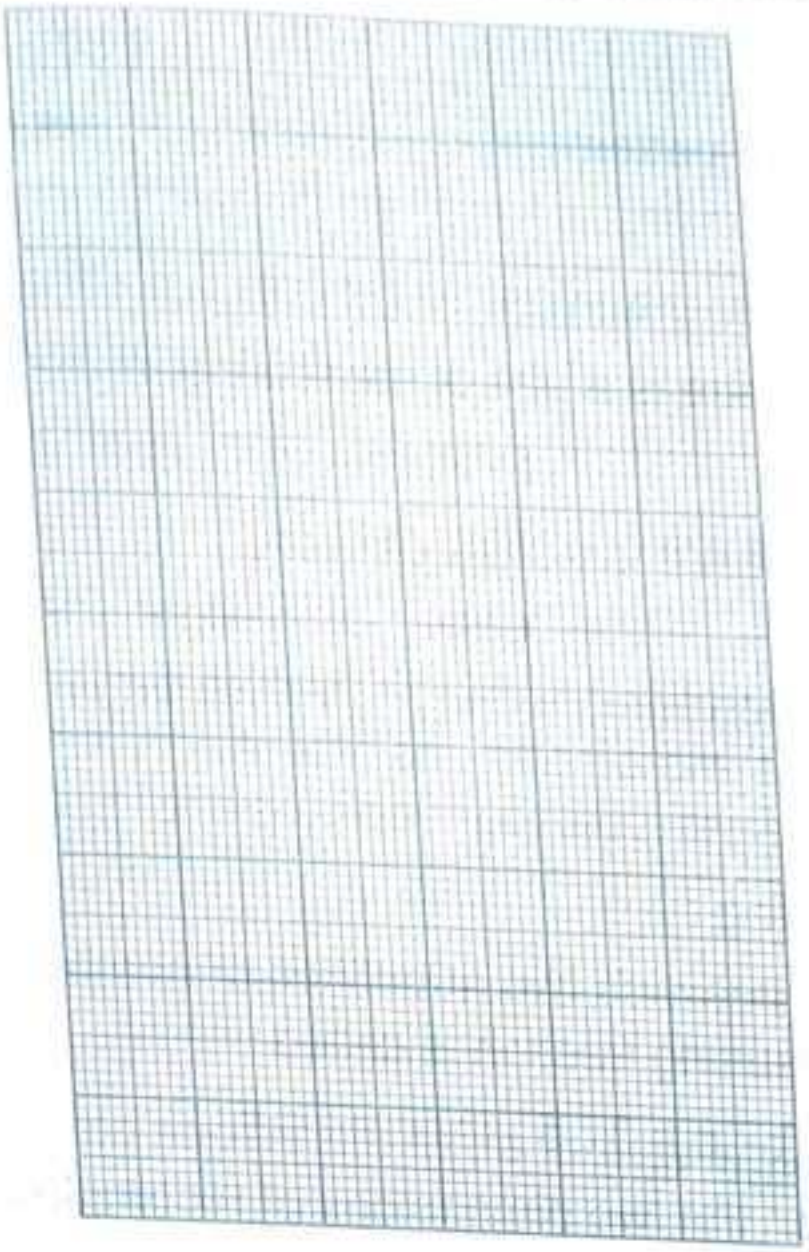
.....

.....

.....

) Using the following table , draw the frequency curve :

| Set | 5 – | 10 – | 15 – | 20 – |
|---|---|---|---|---|
| Frequency | 4 | 8 | 10 | 4 |





nswer the following questions :

**1** Choose the correct answer from the brackets :

(1) The ratio between 16 , 64 in the simplest form = ..... : .....

(1 : 4 **or** 2 : 8 **or** 1 : 8 **or** 2 : 4)

(2) The ratio between the side length of an equilateral triangle and its perimeter = ..... : ..... (3 : 1 **or** 1 : 2 **or** 1 : 3 **or** 1 : 4)

(3) If Hazem studies 21 hours weekly , then the rate of his studying daily = ..... hours per day. (7 **or** 3 **or** 14 **or** 147)

(4) If $\frac{5}{8} = \frac{15}{x}$ , then $x$ = ..... (42 **or** 5 **or** 15 **or** 24)

(5) If the percentage of the number of girls in a class which is mixed is 67 % , then the parcentage of the number of boys in this class = ..... %

(100 **or** 167 **or** 33 **or** 67)

(6) The original price for a shirt is 65 pounds with a discount 15 % , then the paid value = ..... pounds. ( 5 525 or 55.25 or 25.55 or 55 )

(7) $\frac{3}{4}$ = ..... (in decimal fraction). ( 0.2 or 0.5 or 0.25 or 0.75 )

(8) A parallelogram is called rectangle if the measure of one of its angles = ..... °

( 80 or 90 or 91 or 180 )

(9) Description of the pattern ▽○□▽○□ is repetition for .....

( ▽ or ▽□ or ▽○□ or ○ )

(10) 700.5 $cm^3$ = ..... $mm^3$ ( 7 005 or 700 500 or 1 000 or 75 )

(11) The cubic centimetre is a unit of measuring .....

( volume or area or perimeter or length )

(12) The following data are quantitative except .....

( age or height or birth place or weight )

(13) The range = the maximum value □ the minimum value

( × or − or + or ÷ )

## 2 Complete the following :

(1) When comparing between two quantities or numbers of the same type and same units the resulting fraction is called .....

(2) If a : b = 2 : 3 , b : c = 3 : 5 , then a : c = ..... : .....

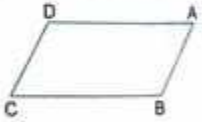
(3) If the ratio between the two dimensions of rectangle is 3 : 4 and its perimeter is 140 cm. , then its area = ..... $cm^2$

(4) The ratio between 250 piastres , $7\frac{1}{2}$ pounds = ..... : ..... (in the simplest form)

(5) $1\frac{3}{4}$ = ..... %

(6) **In the opposite figure :**

ABCD a parallelogram , m (∠ A) + m (∠ B) = ..... °




(7) 1 $m^3$ = ..... litres.

(8) The sum of the edge lengths of a cube is 132 cm. , then its volume = ..... $cm^3$

(9) The following table shows the marks of 50 students in math exam :

| The marks | 10 – | 20 – | 30 – | 40 – 50 | Total |
|---|---|---|---|---|---|
| Number of students | 5 | 15 | 20 | 10 | 50 |

Then the number of students who got less than 40 marks = ..... students.

**3 Answer the following : (Write the steps of the solution)**

(1) The number of pupils in a primary school in the 1st , the 2nd and the 3rd grades is 240 pupils , if the ratio among the three grades is 5 : 4 : 3 , calculate the number of pupils in each grade.

.....

.....

.....

(2) If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. , find its real length in km.

.....

.....

.....

(3) 8 400 $cm^3$ of water is poured into a vessel in the shape of cuboid with internal dimensions 20 cm. , 35 cm. and 45 cm. Find the volume of water needed to be added for the vessel becomes filled with water completely.

.....

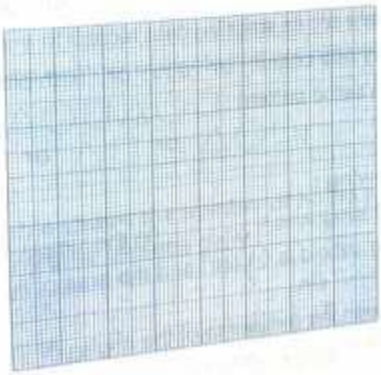
.....

.....

**(4) The following table shows the extra money which 100 workers got in a month in a factory :**

| The extra money | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – | Total |
|---|---|---|---|---|---|---|---|
| Number of workers | 20 | 15 | 30 | 20 | 10 | 5 | 100 |

Draw the frequency curve for this data.



## 6 El-Kalyoubia Governorate — Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{3}{4}$ = ..... (in decimal form). (0.2 *or* 0.5 *or* 0.25 *or* 0.75)

(2) The cube has ..... edges. (4 *or* 6 *or* 8 *or* 12)

(3) If $\frac{4}{6} = \frac{12}{x}$, the $x + 2$ = ..... (16 *or* 18 *or* 20 *or* 22)

(4) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is ..... (1 : 10 *or* 1 : 100 *or* 1 : 1 000)

(5) If the numbers 4 , $x$ , 12 and 18 are proportional , then $x$ = .....
(16 *or* 10 *or* 4 *or* 6)

(6) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
(2 *or* 4 *or* 6 *or* 12)

(7) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to ploughs 42 feddans is ..... hours. (4 *or* 6 *or* 7 *or* 8)

(8) ABCD is a parallelogram in which m (∠ B) = 100° , then m (∠ D) = .....
(120° *or* 60° *or* 100° *or* 50°)

(9) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 , if the weight of Ahmed is 60 kilograms , then the weight of Hani = ..... kilograms. (25 *or* 50 *or* 60 *or* 30)

(10) The two diagonals are equal in length and perpendicular in .....
(rectangle *or* square *or* parallelogram *or* rhombus)

(11) $\frac{3}{10}$ = ..... % (40 *or* 33 *or* 30 *or* 70)

(12) The following data are descriptive data except .....
(favorite colour *or* age *or* birth place *or* blood species)

(13) Complete in the same pattern : □ ○ △ □ ○ △ .....
(□ ○ △ *or* □ △ *or* ○ □ △ *or* ○ △)

**2 Complete the following :**

(1) 5 000 grams : 8 kilograms = ..... (in the simplest form).

(2) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

(3) If the ratio between the measures of the angles of a triangle is 2 : 3 : 4 , then the measure of the greatest angle = .....

(4) 3 litres = ..... $cm^3$.

(5) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$. , its capacity is 729 $cm^3$. , then the volume of the wood of the box = ..... $cm^3$.

(6) The following table shows the marks of 40 students in one test , then the number of students who got less than 30 marks = .....

| Marks | 10 – | 20 – | 30 – 40 |
|---|---|---|---|
| Number of students | 10 | 13 | 17 |

(7) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = .....

(8) The ratio between the side length of the square and its perimeter = .....

(9) The area of the triangle = $\frac{1}{2}$ × ..... × .....

## 3 Answer the following :

(1) Heba bought a mobile for 680 pounds with a discount 15 % Calculate the price of this mobile before the discount.

.....

.....

.....

(2) Two persons started a commercial business , the first paid 5 000 pounds and the second paid 8 000 pounds , at the end of the year the net profit was 3 900 pounds. Calculate the share of each of them from the profit.

.....

.....

.....

(3) A metallic cube of edge length is 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

.....

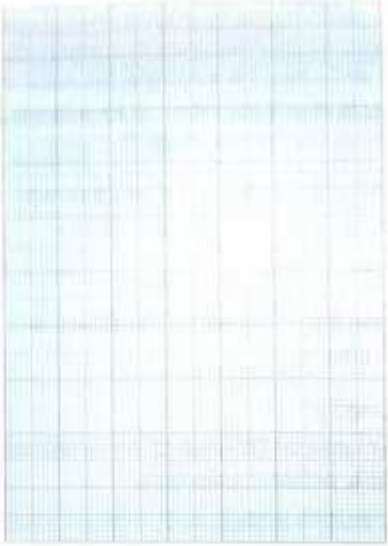
.....

.....

(4) **The following table shows the number of hours which spend by 30 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 3 | 4 | 9 | 8 | 6 | 30 |

Represent these data using the frequency curve.



## 7 El-Sharkia Governorate

East Zagazig Educational Directorate
Omar Al-Farouk Formal School

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) 3 litres = ..... $cm^3$ ( 3 *or* 30 *or* 300 *or* 3 000 )

( 2 ) The range of the set of values 2 , 3 , 6 , 9 and 5 is .....

( 4 *or* 7 *or* 6 *or* 12 )

( 3 ) The percentage is a ratio its second term is .....

( 10 *or* 100 *or* 1 000 *or* 10 000 )

( 4 ) The ratio between the two numbers 2.4 and 3.6 = ..... : .....

( 1 : 4 *or* 2 : 3 *or* 3 : 6 *or* 1 : 16 )

( 5 ) If 2 , 5 , X , 15 are proportional , then X = .....

( 2 *or* 5 *or* 6 *or* 15 )

( 6 ) The diagonals are equal in length in .....

( trapezium *or* rectangle *or* rhombus *or* triangle )

(7) 18 kirats : 1 feddan = ..... : .....

(1 : 2 or 3 : 8 or 1 : 24 or 3 : 4)

(8) $\frac{2}{3} : 3\frac{1}{3}$ = ..... : .....

(1 : 3 or 1 : 2 or 2 : 3 or 1 : 5)

(9) If the drawing scale < 1 , this expresses .....

( equality or maximization or enlargement or minimization )

(10) The consequent of the ratio 3 : 11 is ..... (3 or 5 or 11 or 2)

(11) The ratio between the side length of the square to its perimeter is ..... : ..... (1 : 2 or 1 : 3 or 4 : 1 or 1 : 4)

(12) The following data are descriptive data except .....

( length or birth place or name or favorite colour )

## 2 Complete :

(1) $\frac{3}{4}$ = ..... %

(2) 1 – (25 % + 30 %) = ..... %

(3) The volume of a cuboid is 64 $cm^3$ , and area of its base is 16 $cm^2$ , then its height = ..... cm.

(4) $\frac{2}{5} = \frac{x}{20}$ , then $x$ = .....

(5) If the real length of a tree is 6 m. , and its drawing length is 3 cm. , then the drawing scale = ..... : .....

(6) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

(7) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of performance is .....

(8) If A : B = 1 : 2 , B : C = 3 : 5 , then A : C = ..... : .....

## 3 Answer the following questions :

(1) If the buying price of electric sets is L.E. 60 000 and sold at 10 % profit. Calculate the selling price.

.....

.....

.....

(2) A container has 24 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is 400 $cm^3$. Calculate the number of bottles.

.....

.....

.....

( 3 ) **In the opposite figure :**

ABCD is a parallelogram , then find :

[a] m (∠ D) = .....°

[b] m (∠ ACD) = .....°


( 4 ) **The ratio among the measurements of the angles of a triangle is 3 : 7 : 8 , find the measure of each angle in the triangle.**

.....

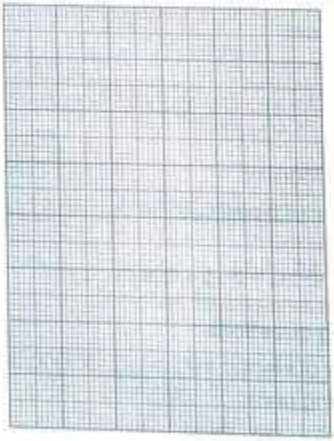
.....

.....

( 5 ) **The following table shows the marks of 100 pupils in one of the math tests :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of pupils | 15 | 30 | 40 | 15 | 100 |

Draw the frequency curve for this distribution.



## 8 El-Monofia Governorate

Ashmoun Educational Zone
Maths Inspection

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The ratio between 5 000 gm. and 8 kg. is .....

( 5 : 8 *or* 5 : 80 *or* 8 : 5 *or* 80 : 5 )

(2) $65\ cm^3$ = ..... mL. ( 0.065 or 6.5 or 65 or 0.65 )

(3) If the numbers 3 , 5 , $x$ and 10 are proportional , then $x$ = .....
( 8 or 6 or 12 or 15 )

(4) A cuboid its base area is $40\ cm^2$ and its height is 5 cm. , then its volume is ..... $cm^3$ ( 200 or 2 000 or 45 or 8 )

(5) The following data are descriptive except .....
( job or religion or weight or hoppy )

(6) A car covers 720 km. in 6 hours , then its rate = ..... km./hr.
( 20 or 120 or 12 or 160 )

(7) $\frac{3}{5}$ = ..... % ( 15 or 40 or 60 or 80 )

(8) If the edge length of a cube is 5 cm. , then the sum of all edges = ..... cm.
( 125 or 15 or 60 or 25 )

(9) If the real length is 6 m. and its drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 1 or 100 : 1 or 1 : 1 000 or 1 : 100 )

(10) If the values of frequency distribution lie between (19 , 49) , then the range of this distribution = ..... ( 30 or 68 or 49 or 19 )

(11) All angles are right and the two diagonals are perpendicular in .....
( rectangle or rhombus or square or parallelogram )

(12) $\frac{5}{7} : \frac{3}{7}$ = ..... : ..... ( 5 : 3 or 3 : 5 or 3 : 7 or 5 : 7 )

(13) A trader sold some goods by losing percentage 20 % , then the percentage of the selling price was ..... % ( 120 or 80 or 20 or 100 )

## 2 Complete the following :

(1) A cube its base area is $25\ cm^2$ , then its volume = ..... $cm^3$

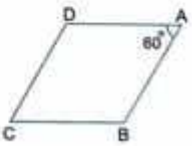
(2) If 7 : 13 = $x$ : 52 , then $x$ = .....

(3) The drawing scale = ..... : .....

(4) 32 % + 27 % + ..... = 100 %

(5) The types of the statistical data are ..... and .....

(6) **In the opposite figure :**
ABCD is a parallelogram
, m ($\angle$ A) = 60°
, then m ($\angle$ B) = .....




(7) If the volume of a cuboid is $36\ cm^3$ , and its height is 4 cm. , then its base area = ..... $cm^2$

( 8 ) An agricultural machine ploughs 18 feddans in 3 hours ، then its performance rate is ——— feddans/hour.

**3 Answer the following :**

( 1 ) If the drawing scale of a map is 1 : 1 000 000 and the real length between two cities is 20 km. Find the distance between them on this map.

.....

.....

.....

( 2 ) Mona bought a TV set with discount 20 % from the declared price which was 2 500 pounds. Find its price after discount.

.....

.....

.....

( 3 ) A box in the shape of a cuboid with dimensions 36 cm. ، 42 cm. and 24 cm. If it is filled with small cubes of edge length 6 cm. ، find the number of these cubes.

.....

.....

.....

( 4 ) **The following table shows the marks of 90 students in one month in math :**

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 90 |

Draw the frequency curve for this distribution.

## 9 El-Dakahlia Governorate

East Mansoura Educational Zone
Maths Supervision

**Answer the following questions :**

**1 Complete the following :**

(1) If $\frac{X}{9} = 15\ \%$ , then $X =$ .....

(2) A rectangle will be a square if its diagonals are .....

(3) $\frac{3}{4} + 5\frac{1}{2} = 7 -$ .....

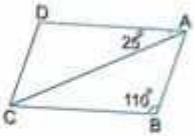
(4) If the length of an insect in a picture is 10 cm. and its real length 2 mm. , then the drawing scale is ..... : .....

(5) If A : B = 4 : 3 , B : C = 2 : 3 , then A : C = .....

(6) **In the opposite figure :**

ABCD is a parallelogram , then :

m (∠ ACD) = ..... °




(7) 8 400 $cm^3$ of water is poured into a vessel in shape of cuboid with base area 700 $cm^2$ , then its height = ..... cm.

(8) The number of sets = the range ÷ .....

(9) An agriculture tractor polughs 28 feddans in 4 hours , then the rate of the tractor = ..... feddans/hour.

**2 Choose the correct answer :**

(1) 9.52 litres = ..... $dm^3$ ( 9.52 or 95.2 or 9 520 or 95 200 )

(2) The following data are descriptive data except .....

( colour or age or birth place or blood type )

(3) If the drawing scale ..... 1 , this express enlargement.

( > or = or < or ≤ )

(4) The sum of all edges of a cube is 132 cm. , its volume = ..... $cm^3$

( 11 or 33 or 121 or 1 331 )

(5) 12 kirats : 1.25 feddan = ..... ( 5 : 2 or 2 : 5 or 1 : 2 or 120 : 125 )

(6) If $\frac{2}{5} = \frac{X}{15}$ , then $X - 2 =$ ..... ( 4 or 5 or 6 or 15 )

(7) The product of the extremes ..... The product of means.

( > or = or < )

**3 Answer the following :**

( 1 ) A company for selling the electric sets shows a TV set for 2 300 L.E. , if the percentage of profit is 12 % Find the buying price of the TV set.

.....

.....

.....

.....

( 2 ) The ratio between the length and the width of a rectangle is 9 : 5 , if the perimeter of the rectangle is 56 cm. Find out the length and the width , then calculate its area.

.....

.....

.....

.....

**4 Choose the correct answer :**

( 1 ) $\frac{13}{20}$ = ..... % ( 0.65 *or* 6.5 *or* 65 *or* 650 )

( 2 ) If the numbers 1 , 4 , $x$ , 28 are proportional , then $x$ = .....

( 1 *or* 4 *or* 7 *or* 28 )

( 3 ) The parallelogram with right angle is called .....

( rectangle *or* square *or* rhombus *or* trapezium )

( 4 ) The ratio between the perimeter of a square and its side length = .....

( 1 : 4 *or* 4 : 1 *or* 1 : 3 *or* 3 : 1 )

( 5 ) The range of the set of values (29 , 33 , 57 , 40 , 36 , 39) is .....

( 28 *or* 32 *or* 33 *or* 86 )

( 6 ) 10 litres of water were poured in a vessel as a cuboid with square base of side length 25 cm. , then the height of water = ..... cm.

( 400 *or* 40 *or* 16 *or* 2.5 )

**5 Answer the following :**

( 1 ) A cube shaped vessel , its internal edge is 30 cm. and it is filled with oil.

[a] Calculate the capacity of the vessel.

[b] If the price of one litre of oil is 9.5 pounds. Calculate the price of all oil.

.....

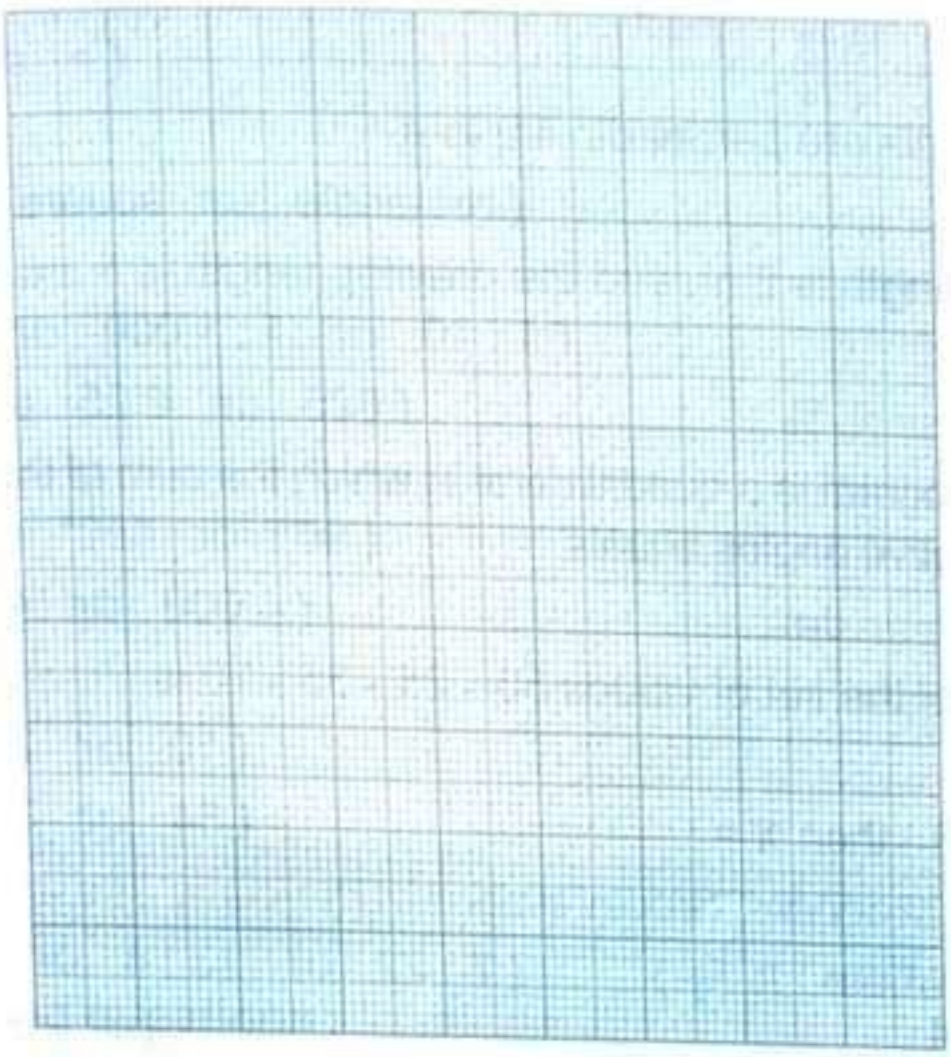
.....

(2) **The following table shows the distribution of the weekly wages of 60 workers in a factory :**

| Weekly wages | 50 – | 60 – | 70 – | 80 – | 90 – | 100 – | 110 – | Total |
|---|---|---|---|---|---|---|---|---|
| No. of workers | 6 | 8 | 12 | 18 | 10 | 4 | 2 | 60 |

[a] Draw the frequency curve of the distribution.

[b] Find the percentage of workers whose weekly wages are 100 L.E. and more.



## 10 Suez Governorate — South Educational Directorate Maths Inspection

**Answer the following questions :**

**1 Complete the following statements :**

(1) If the drawing scale < 1 , this expresses .....

(2) 12.5 % = $\frac{\text{.....}}{\text{.....}}$

(3)  ..... (in the same pattern)

(4) 300 $mm^3$ = ..... $cm^3$

(5) 16 kirat : 2 feddans = ..... : ..... (in the simplest form)

(6) The number of sets = $\frac{\text{the range}}{\text{.....}}$

(7) If A : B = 4 : 3 , B : C = 2 : 3 , then A : C = ..... : .....

(8) The area of the base of the cuboid = $\frac{\text{.....}}{\text{.....}}$

( 9 ) A computer colour printer prints 12 papers each 4 minutes. The rate of work of this printer is .....

## 2 Choose the correct answer :

( 1 ) If $\frac{4}{6} = \frac{12}{x}$ , then $x + 2$ = ..... ( 16 or 18 or 20 or 22 )

( 2 ) The figure XYZL in which XY = ZL , YZ = XL , XY ≠ YZ , the two diagonals are equal in length. The name of the figure is .....

( rectangle or square or rhombus or cube )

( 3 ) $\frac{432}{145}$ ..... $\frac{513}{614}$ ( > or < or = or ≤ )

( 4 ) The diagonals are perpendicular in a .....

( rectangle or square or parallelogram )

( 5 ) If the real length is 5 m. and the drawing length is 5 cm. , then the drawing scale is ..... ( 1 : 10 or 1 : 1 000 or 1 : 100 or 1 : 1 )

( 6 ) 0.625 = ..... % ( 625 or 6.25 or 62.5 or 6 500 )

( 7 ) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals ..... ( 90° or 180° or 108° or 120° )

( 8 ) 4 $m^3$ = ..... $dm^3$ ( 4 000 or 400 or 4 or 40 )

( 9 ) The range of the set of values 50 , 25 , 35 , 20 is .....

( 10 or 20 or 30 or 40 )

(10) If $\frac{x + 18}{9} = 8$ , then $x$ = ..... ( 54 or 72 or 45 or 27 )

(11) The ratio between the circumference of the circle and its diameter length = ..... (where : $\pi$ $\frac{22}{7}$ ) ( 7 : 22 or 13 : 4 or 22 : 7 or 4 : 13 )

(12) 1 ..... $\frac{4}{3}$ ( > or < or = or ≥ )

(13) The following data are descriptive data except .....

( favorite colour or age or birth place or blood species )

## 3 Answer the following :

( 1 ) In an English exam , Adel scored 13 marks from 20 marks , find the percentage of the scored mark of Adel in English.

.....

( 2 ) The sum of lengths of all edges of a cube is 132 cm. Calculate its volume.

.....

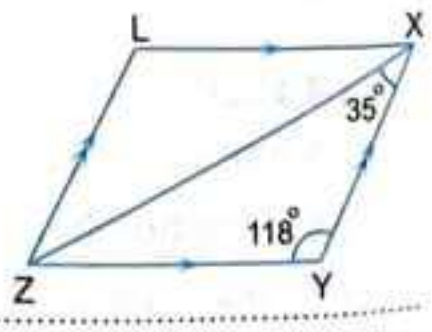
.....

( 3 ) **In the opposite figure :**

XYZL is a parallelogram in which

m (∠ Y) = 118° , m (∠ YXZ) = 35°

Find : m (∠ L) , m (∠ LXZ)

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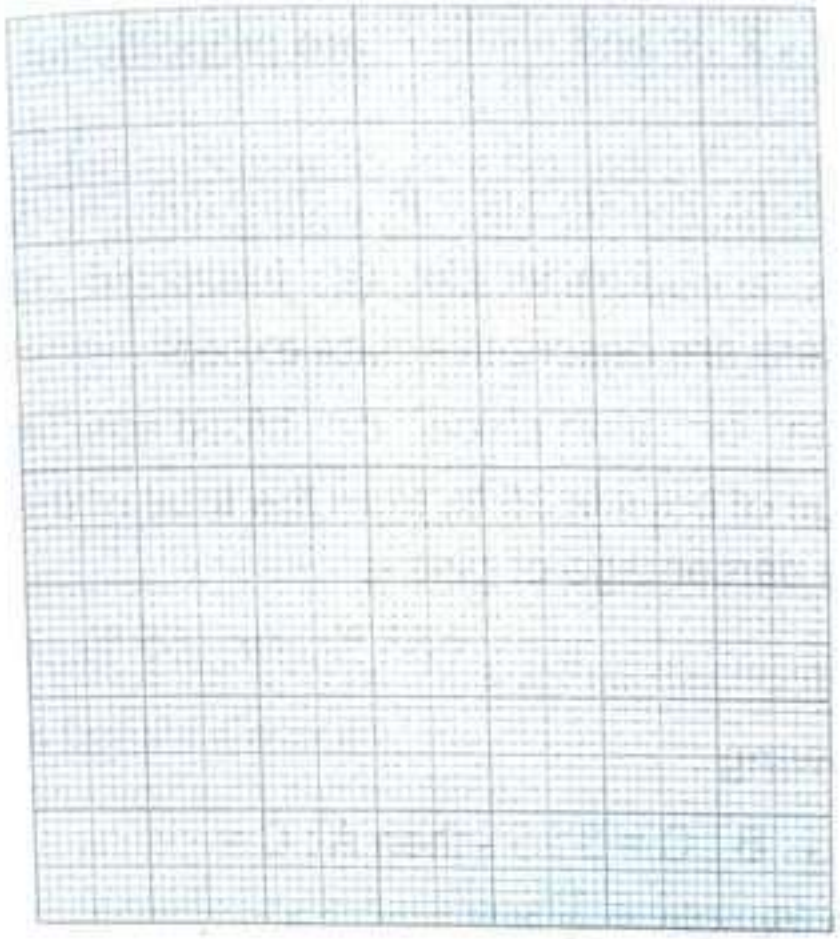
.....

(4) **The following table shows the marks of 100 students in math exam :**

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 10 | **100** |

Draw the frequency curve for this distribution.



## 11 Port Said Governorate — Maths Inspector

**Answer the following questions :**

**1 Choose the correct answer :**

(1) The range of the set of values : 7 , 3 , 6 , 9 and 5 is .....

( 2 *or* 4 *or* 6 *or* 12 )

(2) The centimetre cube is a unit of measuring the .....

( length *or* area *or* volume *or* weight )

(3) 18 kirats : 2 feddans = ..... ( 1 : 2 *or* 3 : 8 *or* 1 : 24 *or* 18 : 2 )

(4) A printer prints 15 papers in 3 minutes , then the rate of printing of this printer = ..... papers/minute ( 5 *or* 3 *or* 45 *or* 0.5 )

(5) If the drawing scale < 1 , this expresses .....

( equality *or* maximization *or* enlargement *or* minimization )

(6) The cube has ..... edges. ( 4 *or* 6 *or* 8 *or* 12 )

(7) The diagonals are perpendicular in .....

( rectangle *or* trapezoid *or* rhombus *or* parallelogram )

( 8 ) The ratio between side length of the square to its perimeter is .....

( 1 : 2 **or** 1 : 3 **or** 4 : 1 **or** 1 : 4 )

( 9 ) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measurement of the smallest angle is .....°

( 10 **or** 20 **or** 30 **or** 60 )

(10) The numbers 1 , 2 , 6 and ..... are proportional.

( 2 **or** 6 **or** 8 **or** 12 )

(11) If one angle of parallelogram is right , then it is called .....

( rectangle **or** trapezoid **or** rhombus **or** cube )

(12) The following data are descriptive data except .....

( age **or** birth place **or** blood species **or** favourite colour )

(13) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is .....

( 53 % **or** 65 % **or** 100 % **or** 135 % )

## 2 Complete the following :

( 1 ) If A : B = 2 : 3 , B : C = 3 : 5 , then A : C = ..... : .....

( 2 ) The area of the triangle = $\frac{1}{2}$ × ..... × .....

( 3 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

( 4 ) $\frac{4}{5}$ = ..... %

( 5 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

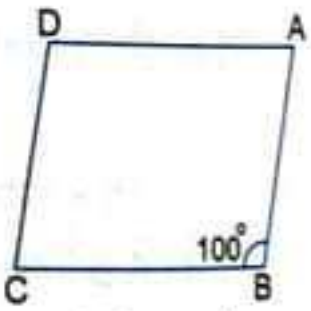
( 6 ) A wooden box in the form of a cube , its external volume is 1 000 $cm^3$ and its capacity is 729 $cm^3$ , then the volume of wood of the box = ..... $cm^3$

( 7 ) If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = .....

( 8 ) **In the opposite figure :**

ABCD is a parallelogram

, then m ($\angle$ A) = .....°




( 9 ) The following table shows the marks of 50 students in one month in maths :

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 5 | 15 | 20 | 10 | **50** |

Then the number of students whose marks are less than 40 is ..... students.

**B Answer the following :**

(1) A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

.....

.....

.....

(2) Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds. Calculate the share of each of them.

.....

.....

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.....

.....

(3) Mariam bought a dress for 425 pounds with a discount 15 % Calculate the price of the dress before discount.

.....

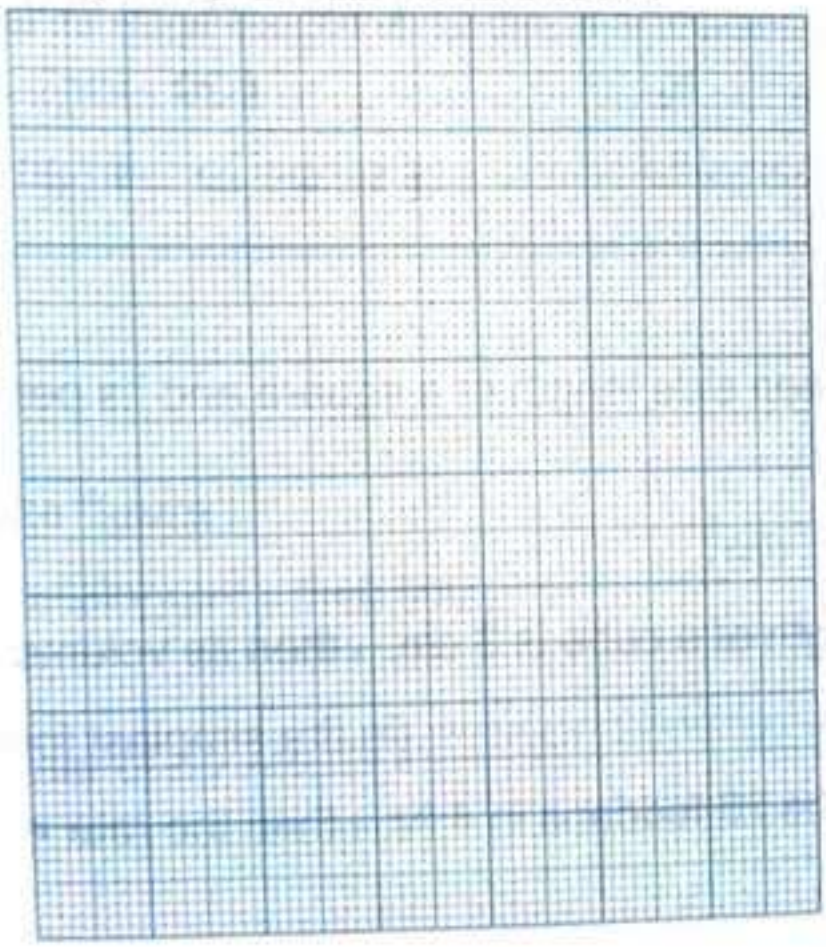
.....

.....

(4) **The following table shows the marks of 100 students in one month in maths test :**

| **Marks** | 10 – | 20 – | 30 – | 40 – 50 | **Total** |
|---|---|---|---|---|---|
| **Number of students** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve of this distribution.



## 12 El-Menia Governorate

Marghergha Educational Directorate
St. Mark & El Tawfik Schools

**Answer the following questions :**

**1 Choose the correct answer :**

(1) $\frac{1}{2}$ kg. ..... 700 gm. ( < or > or = or ≥ )

(2) If $\frac{5}{x} = \frac{10}{14}$ , then $x$ = ..... ( 10 or 14 or 2 or 7 )

(3) The cube has ..... edges. ( 10 or 12 or 8 or 11 )

(4) The diagonals are equal in length in .....

( parallelogram or rectangle or rhombus or trapezium )

(5) The following data are descriptive except .....

( colour or birth place or age or name )

(6) Volume of cuboid whose dimensions are 3 cm. , 2 cm. and 5 cm. = ..... $cm^3$. ( 30 or 9 or 25 or 60 )

(7) Range of set of values 7 , 3 , 6 , 9 and 5 = .....

( 3 or 4 or 6 or 17 )

(8) $\frac{3}{4}$ = ..... % ( 34 or 75 or 57 or 0.53 )

(9) a : b = 3 : 4 , b : c = 3 : 5 , then a : c = ..... : .....

( 9 : 20 or 2 : 3 or 3 : 5 or 3 : 2 )

(10) 3.6 litres = ..... $cm^3$ ( 3.6 or 3 600 or 360 or 0.36 )

(11) 1 – 70 % = ..... % ( 30 or 32 or 50 or 20 )

(12) $\frac{1}{4} : \frac{1}{3}$ = ..... : ..... ( 1 : 4 or 1 : 3 or 3 : 4 or 4 : 3 )

**2 Complete :**

(13) The ratio between side length of a square and its perimeter = ..... : .....

(14) 4 $m^3$ = ..... $dm^3$

(15) If the edge length of a cube is 3 cm. , then its volume = ..... $cm^3$

(16) 8 hr. : 3 days = ..... : ..... (in the simplest form).

(17) A tractor ploughs 28 feddans in 4 hr. , then the rate = ..... feddans/hr.

(18) The volume of cuboid 64 $cm^3$ and area of its base is 16 $cm^2$ , then its height = .....

(19) 30 % of 200 = .....

(20) If drawing length is 6 cm. and the real length is 6 m. , then the drawing scale = .....

**3 Answer the following :**

(21) If ratio between Hani and Maged weights is 5 : 6 and the difference between their weights is 10 kg. Find the weight of each of them.

.....

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(22) Dina bought a mobile for 1 800 L.E. with a discount 10 % Calculate the price of the mobile before the discount.

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.....

(23) A cube of metal its edge length is 12 cm. If it is wanted to be melted and converted into ingots form of cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that can be obtained.

.....

.....

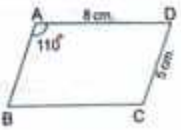
.....

(24) **In the opposite figure :**

ABCD is a parallelogram , then find :

[a] m (∠ C) = .....°

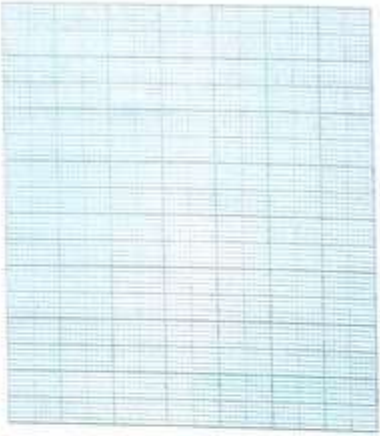
[b] The perimeter of ▱ ABCD = .....



(25) The following table shows marks of 50 students in maths test :

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| No. of students | 8 | 14 | 12 | 10 | 6 | 50 |

Draw the frequency curve of this distribution.



## 13 Souhag Governorate — Maths Supervision

**Answer the following questions :**

**1 Choose the correct answer :**

( 1 ) The side length of a square = 3 cm. , then the ratio between its side length and its perimeter equals .....
( 4 or 3 or $\frac{1}{4}$ or $\frac{1}{3}$ )

( 2 ) If the volume of a cube = 125 $cm^3$ , then its base area = .....
( 25 $cm^2$ or 25 cm. or 5 $cm^2$ or 5 cm. )

( 3 ) If $\frac{2}{7} = \frac{X-3}{21}$ , then $X$ = .....
( 6 or 9 or 12 or 3 )

( 4 ) If Hoda bought a mobile phone for 900 pounds with a discount 10 % , then the price of the mobile phone before the discount is ..... pounds.
( 9 000 or 1 000 or 990 or 100 )

( 5 ) The diagonals are perpendicular in a .....
( rectangle or trapezium or rhombus or parallelogram )

( 6 ) $\frac{24}{5}$ = .....
( $4\frac{1}{5}$ or $3\frac{2}{5}$ or $4\frac{4}{5}$ or $2\frac{4}{5}$ )

(7) **In the opposite figure :**
The number of
trapezoids is .....

( 3 or 4 or 5 or 2 )

(8) If 100 grams from a food stuff gives 300 calories , how many calories will be given from 30 grams of this food ? ( 900 or 9 000 or 90 or 100 )

(9) If the sum of the edge lengths of a cube = 144 cm. , then its volume = .....
( 144 $cm^3$ or 1 728 cm. or 1 728 $cm^3$ or 144 $cm^2$ )

(10) 1 – (35 % + 25 %) = ..... ( $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$ )

(11) $\frac{513}{614}$ ..... $\frac{432}{145}$ ( < or > or = or ≥ )

(12) The ratio between 3 feddans : 24 kirats = .....
( 3 : 2 or 3 : 1 or 1 : 8 or 1 : 4 )

(13) The following data are descriptive except .....
( favorite colour or birth place or age or blood species )

## 2 Complete each of the following :

(1) 1.5 litres + 0.5 $dm^3$ + 500 $cm^3$ = ..... litres.

(2) The capacity is the volume of the inner space for any .....

(3) If the drawing scale < 1 , then this expresses .....

(4) The rectangle is a parallelogram .....

(5) 900 $mm^3$ = ..... $cm^3$

(6) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = .....

(7) ..... is a cuboid with equal dimensions.

(8) The four sides are equal in length in each of ..... , .....

(9) The volume of a cuboid is 64 $cm^3$ and the area of its base is 16 $cm^2$ , then its height = ..... cm.

## 3 Answer the following questions :

(1) A man died and left a piece of land for building its area is 17 kirats we recommended for building on orphan house on area equals 5 kirats , the remainder is distributed between his son and his daughter in the ratio 2 : 1 , calculate the share of each of them from the land.

.....

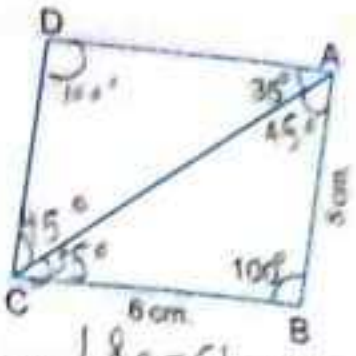
.....

.....

.....

**( 2 ) In the opposite figure :**

ABCD is a parallelogram in which AB = 5 cm. , BC = 6 cm. m (∠ B) = 100° and m (∠ DAC) = 35° , without using measuring tools , find :




[a] m (∠ D) = .....°

[b] m (∠ ACD) = .....°

[c] The perimeter of the parallelogram ABCD = ..... cm.

**( 3 )** Heba bought a mobile phone for 2 185 pounds with a discount 5 % , calculate the price of the mobile phone before the discount.

.....

.....

.....

**( 4 )** A restaurant owner prepares 80 food meals , all are of the same kind , using 20 kg. of meat , what is the rate of meat needed for preparing one meal , what is the rate of meat needed for preparing 4 meals ?

.....

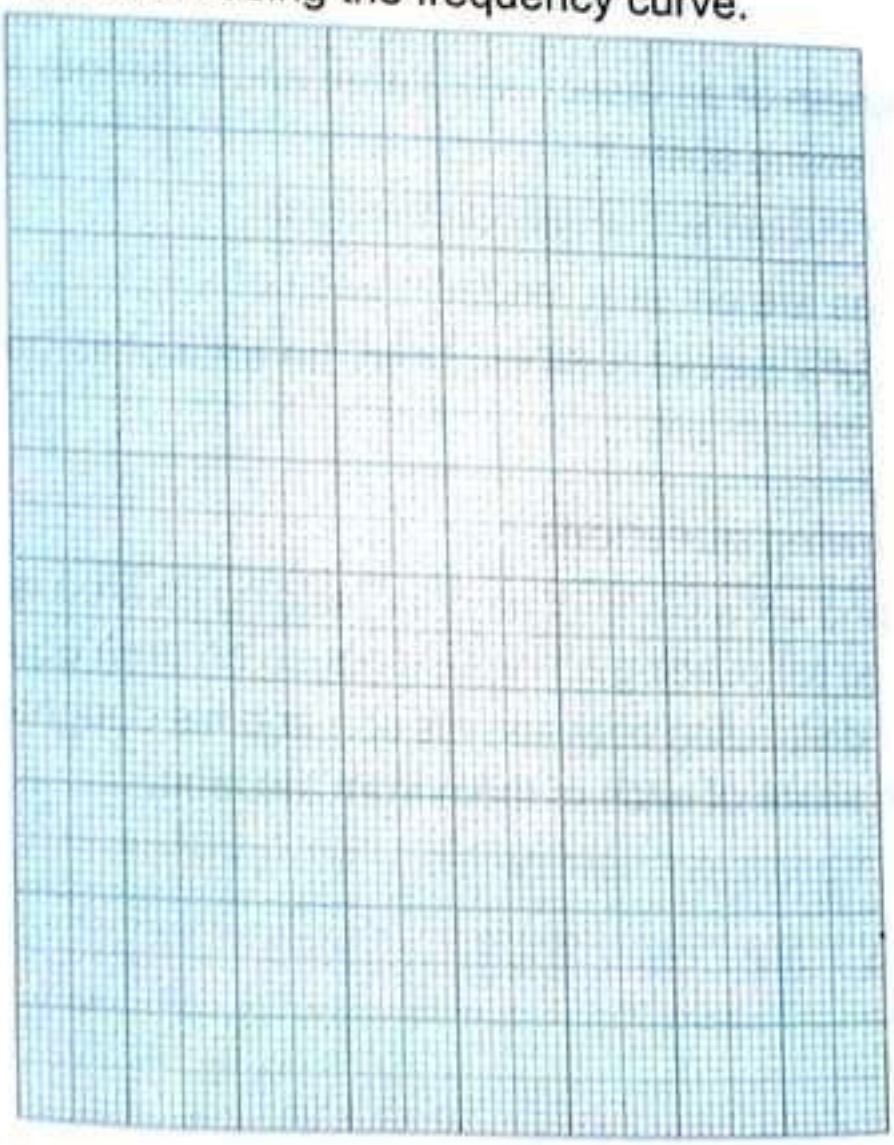
.....

.....

**( 5 ) The following table shows the number of hours which are spent by 60 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 9 | 13 | 18 | 12 | 8 | 60 |

Represent these data using the frequency curve.



## 14 Luxor Governorate — Arment Educational Zone, Math Supervision

Answer the following questions :

**1 Complete :**

(1) The range of the set of values = the maximum value – .....

(2) The volume of the cuboid = ..... × .....

(3) 15 $dm^3$ = ..... $cm^3$

(4) The two diagonals are perpendicular in each of ..... and .....

(5) The ratio between two numbers 125 : 25 = ..... : .....

(in the simplest form)

(6) 2.5 feddans : 18 kirats = ..... : ..... (in the simplest form)

(7) 0.4 = ..... %

(8) If A : B = 5 : 9 , B : C = 9 : 11 , then A : C = ..... : .....

(9) The drawing scale = $\frac{\text{.....}}{\text{.....}}$

**2 Choose the correct answer :**

(1) The four sides are equal in length in .....

( triangle or rhombus or parallelogram or trapezium )

(2) 2.5 : 5.75 = ..... : .....

( 10 : 13 or 23 : 10 or 25 : 575 or 10 : 23 )

(3) The volume of a cuboid is 81 $cm^3$ and the area of its base is 27 $cm^2$ , then its height = .....

( 24 cm. or 3 cm. or 2 cm. or 4 cm. )

(4) The ratio between the perimeter of the square and its side length = ..... : .....

( 1 : 2 or 1 : 3 or 4 : 1 or 2 : 1 )

(5) The ratio between the child's age and his father's age = 2 : 15 , if the child's age is 6 years , then his father's age = ..... years.

( 45 or 30 or 39 or 53 )

(6) 46 $dm^3$ = ..... litres.

( 46 000 or 0.064 or 46 or 6 400 000 )

(7) Hassan spends L.E. 70 within a week , then the rate of what Hassan spends daily = .....

( 15 L.E./day or 10 L.E./day or 5 L.E./day or 7.5 L.E./day )

(8) The sum of edge lengths of a cube = 48 cm. , then its volume = ..... $cm^3$

( 26 or 216 or 729 or 64 )

(9) The following data are descriptive data except .....
( age or blood specie or favorite food or birth place )

(10) If the numbers 4 , $X$ , 12 , 18 are proportional , then $X$ = .....
( 2 or 3 or 4 or 6 )

(11) If the drawing scale ..... 1 , this expresses maximization.
( > or = or < )

(12) Ahmed bought a car for L.E. 50 000 and sold it by profit 10 % , then the selling price = L.E. .....
( 45 000 or 55 000 or 75 000 or 2 000 )

(13) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....
( 4 or 5 or 6 or 7 )

**3 Answer the following :**

(1) If the drawing scale of a map is 1 : 1 500 000 , and the distance between two cities on this map = 3 cm. , find the real distance between them in km.

.....

.....

.....

.....

(2) Three persons started in business. The first paid L.E. 1 500 , the second paid L.E. 2 500 and the third paid L.E. 2 000 , at the end of the year the net profit = L.E. 6 000 Calculate the share of each one of them.

.....

.....

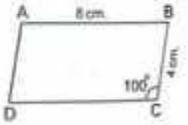
.....

.....

(3) **In the opposite figure :**

ABCD is a parallelogram in which AB = 8 cm. , BC = 4 cm. , m (∠ C) = 100°

Find :




[a] m (∠ ADC) = .....

[b] The perimeter of the parallelogram ABCD = .....

(4) **The following table shows the number of the hours which spent by 20 pupils to study their lessons daily :**

| Number of hours | 1 – | 2 – | 3 – | 4 – | 5 – 6 | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 1 | 6 | 3 | 7 | 3 | 20 |

Represent this data by using the frequency curve.

## 15 Aswan Governorate

Education Administration
El-Salam Primary School

**Answer the following questions :**

**1 Choose the correct answer :**

(1) The ratio between the length of the side of the equilateral triangle and its perimeter = ..... ( 1 : 1 or 1 : 3 or 1 : 4 or 1 : $\pi$ )

(2) Hassan spends L.E. 45 within three days , then rate = ..... L.E./day

( 12 or 13 or 14 or 15 )

(3) If the drawing scale > 1 , this expresses .....

( minimization or enlargement or equality or congruent )

(4) In one of the classes the number of boys is 15 and the number of girls is 20 pupils , then the ratio between number of boys and the number of girls = ..... : ..... ( 1 : 4 or 1 : 2 or 1 : 3 or 3 : 4 )

(5) The volume of a cube of edge length 2 cm. = ..... $cm^3$

( 8 or 16 or 34 or 60 )

(6) 3 litres = ..... $cm^3$ ( 3 or 300 or 3 000 or 9 000 )

(7) 75 % = ..... ( $\frac{1}{4}$ or $\frac{1}{2}$ or $\frac{3}{4}$ or $\frac{5}{5}$ )

(8) If $\frac{2}{3} = \frac{10}{x}$ , then $x$ = ..... ( 6 or 15 or 20 or 25 )

(9) If one of the angles of a parallelogram is right , then its called .....

( rectangle or rhombus or square or cube )

(10) 0.35 = ..... % ( 35 or 3.5 or 0.35 or 0.37 )

(11) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 10 or 1 : 100 or 1 : 500 or 1 : 1 000 )

(12) The following data are descriptive data except .....

( favourite colours or age or name or blood species )

(13) If the shirt with price L.E. 120 at 20 % discount , then the value of discount = L.E. ..... ( 15 or 24 or 30 or 40 )

## 2 Complete the following :

( 1 ) A company for selling electric sets , it shows a TV set for L.E. 2 100 , if the percentage of the profit is 12 % , then the buying price of the TV set = .....

( 2 ) In the following table :

| Sets | 10 – | 20 – | 30 – |
|---|---|---|---|
| Frequency | 4 | 6 | 2 |

The centre of the set (10 –) = .....

( 3 ) There are 560 students , if the ratio between numbers of girls to the number of boys is 3 : 5 , then the number of girls = ..... girls.

( 4 ) The ratio between $\frac{1}{2} : \frac{3}{5}$ = .....

( 5 ) 0.6 = ..... %

( 6 ) ○△□○△□ ..... (in the same pattern)

( 7 ) If the numbers 6 , 8 , 3 , $x$ are proportional , then the value of $x$ = .....

( 8 ) A cuboid of base area is 16 $cm^2$ and its height is 5 cm. , then the volume = ..... $cm^3$

( 9 ) The range of the set of values 50 , 25 , 35 , 20 = .....

## 3 Answer the following questions :

( 1 ) Khaled bought a flat for L.E. 150 000 , he sold it at 5 % loss. Calculate the selling price.

.....

.....

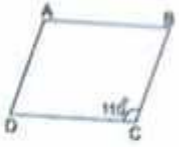
.....

.....

.....

(2) A triangular piece of land the ratio between lengths of its sides 4 : 6 : 7 , if the perimeter of this piece of land is 51 metres.
Find the lengths of sides of piece of land.

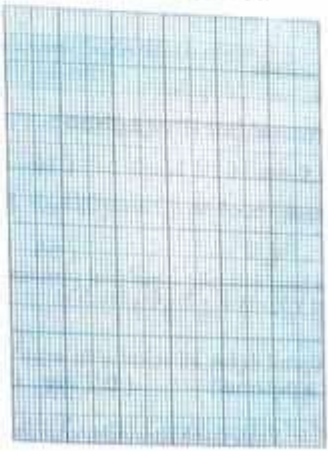
(3) **In the opposite figure :**
ABCD is a parallelogram in which
$m(\angle C) = 110°$
Find : [a] $m(\angle A) =$ .....°
[b] $m(\angle B) =$ .....°




(4) **The following table shows the marks of 100 students in maths exam :**

| Marks | 10 – | 20 – | 30 – | 40 – 50 |
|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 |

Represent these data by a frequency curve.



# Answers of Schools' Examinations for the Year 2020

## 1 Cairo

**1** (1) 1 : 4 (2) 6 (3) 500
(4) 8 (5) 6 : 4 : 3 (6) 1 000
(7) 1 : 1 (8) 1 : 4 (9) 400
(10) favorite color (11) $\frac{1}{2}$
(12) 1 (13) $\frac{1}{2}$

**2** (1) 1 : 2 (2) 6 (3) 100
(4) 100 (5) 3
(6) [a] 80° [b] 5 : 4 [c] 20
[d] rhombus

**3** (1) Price before discount : Discount : Price after discount

| | | |
|---|---|---|
| 100 % | : 10 % : | 90 % |
| ? | : : | 1 800 |

The price before discount
$= \frac{100 \times 1\,800}{90} = 2\,000$ pounds.

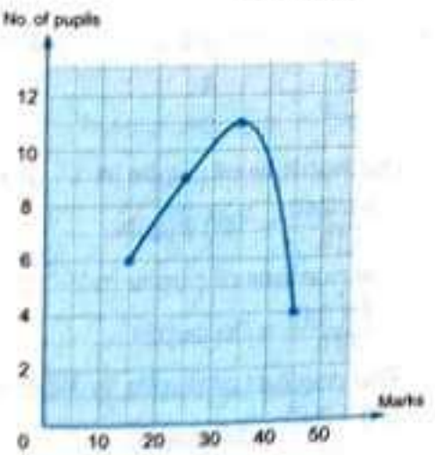
(2) The capacity $= 40 \times 30 \times 1.8$
$= 2\,160\ m^3 = 2\,160\,000$ L

(3) Length in drawing : Length in reality

| | | |
|---|---|---|
| 1 | : | 600 000 |
| 4 | : | ? |

The real distance $= \frac{600\,000 \times 4}{1}$
$= 2\,400\,000$ cm.
$= 24$ km.

(4)




## 2 Cairo

**1** (1) 5 : 7 (2) rectangle (3) 50
(4) 8 (5) 1 : 400 (6) 35
(7) 8 (8) 6 (9) 46
(10) 72 (11) $4\frac{4}{5}$ (12) =
(13) age

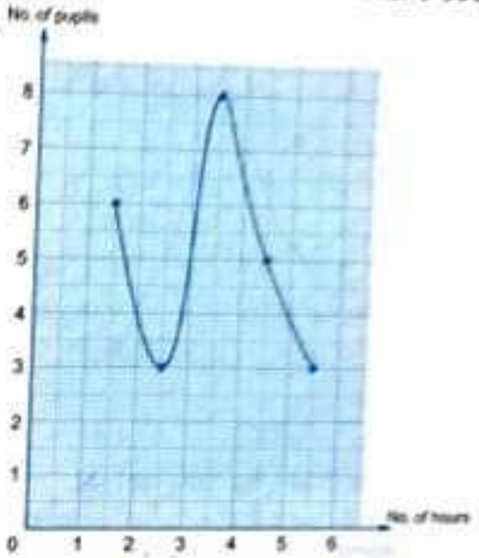
**2** (14) 3 : 8 (15) 45° (16) parallelogram
(17) 20 (18) 1 : 300 000
(19) 60 (20) 3 (21) 3 (22) 64

**3** (23) m (∠ A) = 130° , m (∠ ABD) = 20°
(24) The rate = $\frac{21}{7}$ = 3 hr./day
(25) Price before discount : Discount : Price after discount

| | | |
|---|---|---|
| 100 % | : 5 % : | 95 % |
| ? | : : | 7 600 |

The price before discount = $\frac{100 \times 7\,600}{95}$
= L.E. 8 000

(26)




## 3 Giza

**1** (1) < (2) 1 : 2 (3) 5
(4) 90° (5) 40 (6) 0.3
(7) age (8) 54 (9) 1 : 300 000
(10) 8 : 15 (11) 67 (12) 216
(13) 9

**2** (1) an equality of two ratios or more
(2) rhombus (3) 9 (4) 17
(5) 40 (6) $\frac{2}{25}$ litre / km.
(7) enlargement (8) 40° , 110°
(9) 14

**3** (1)

| 1st angle | : 2nd angle | : 3rd angle | : Sum |
|---|---|---|---|
| 1 | : 2 | : 3 | : 6 |
| ? | : ? | : ? | : 180° |

The measure of 1st angle $= \frac{1 \times 180°}{6} = 30°$

The measure of 2nd angle $= \frac{2 \times 180°}{6} = 60°$

The measure of 3rd angle $= \frac{3 \times 180°}{6} = 90°$

(2) Buying price : Profit : Selling price
100 % : 6 % : 106 %
? : ? : 3 180

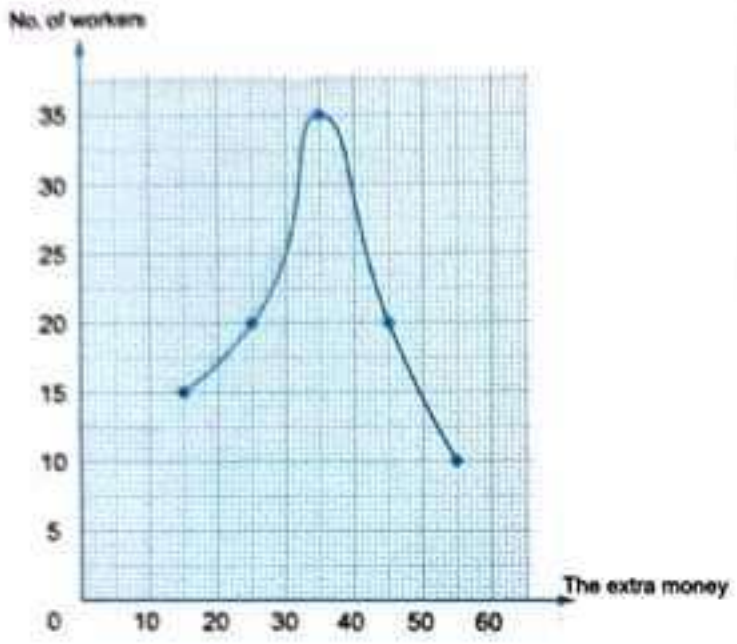
The buying price = $\frac{100 \times 3\,180}{106}$
= L.E. 3 000

The profit = 3 180 – 3 000 = L.E. 180

(3) The base area = $25 \times 25 = 625$ cm$^2$.

The height = $\frac{10 \times 1\,000}{625}$ = 16 cm.

(4)




## 4 Giza

1 (1) blood species (2) 1 : 2
(3) 35 (4) ▨ (5) 6
(6) 40 (7) 9 : 10 (8) rectangle
(9) A × D = B × C (10) 120
(11) = (12) 1 : 1 (13) volume

2 (1) 3 : 8 (2) 2 : 5 (3) 25
(4) 80 (5) 20 : 1
(6) rectangle , square (7) 6
(8) 60° (9) 216

3 (1) 1st piece : 2nd piece : Sum
6 : 8 : 14
? : ? : 126

The length of 1st piece = $\frac{6 \times 126}{14}$
= 54 cm.

The length of 2nd piece = $\frac{8 \times 126}{14}$ = 72 cm.

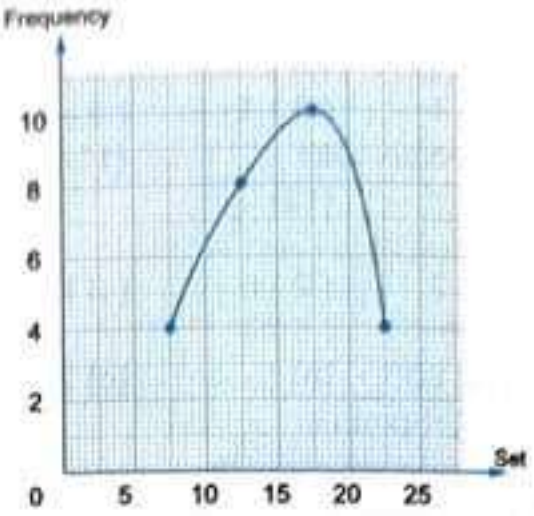
(2) The base area = $3 \times 3 = 9$ cm$^2$.

The height = $\frac{54}{9}$ = 6 cm.

(3) Before interest : Interest : After interest
100 % : 10 % : 110 %
3 000 : : ?

The money after one year = $\frac{110 \times 3\,000}{100}$
= L.E. 3 300

(4)




## 5 Alexandria

1 (1) 1 : 4 (2) 1 : 3 (3) 3
(4) 24 (5) 33 (6) 55.25
(7) 0.75 (8) 90° (9) ▽○□
(10) 700 500 (11) volume (12) brith place
(13) –

2 (1) ratio (2) 2 : 5 (3) 1 200
(4) 1 : 3 (5) 175 (6) 180°
(7) 1 000 (8) 1 331 (9) 40

3 (1) 1st grade : 2nd grade : 3rd grade : Sum
5 : 4 : 3 : 12
? : ? : ? : 240

The number of pupils in 1st grade
= $\frac{5 \times 240}{12}$ = 100 pupils.

The number of pupils in 2nd grade
= $\frac{4 \times 240}{12}$ = 80 pupils.

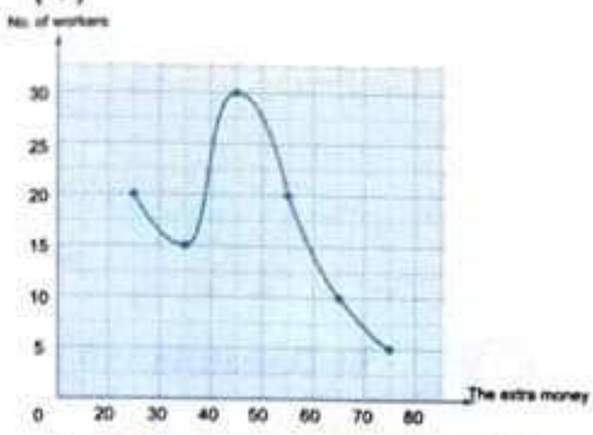
The number of pupils in 3rd grade
= $\frac{3 \times 240}{12}$ = 60 pupils.

(2) Length in drawing : Length in reality
1 : 1 100 000
15 : ?

The real length = $\frac{1\,100\,000 \times 15}{1}$
= 16 500 000 cm.
= 165 km.

(3) The volume of the vessel
$= 20 \times 35 \times 45 = 31\,500\ cm^3$.
The volume of water needed
$= 31\,500 - 8\,400 = 23\,100\ cm^3$.

(4)




## 6 El-Kalyoubia

**1** (1) 0.75 (2) 12 (3) 20
(4) 1 : 100 (5) 6 (6) 6
(7) 6 (8) 100° (9) 50
(10) square (11) 30 (12) age
(13) □ ○ △

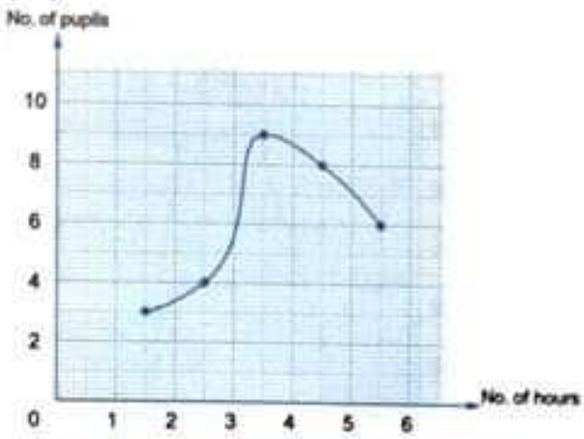
**2** (1) 5 : 8 (2) 4 (3) 80°
(4) 3 000 (5) 271 (6) 23
(7) 2 : 5 (8) 1 : 4
(9) base length × corresponding height

**3** (1) Price before discount : Discount : Price after discount
100 % : 15 % : 85 %
? : : 680
The price before discount $= \frac{100 \times 680}{85}$
$= 800$ pounds.

(2) 1st person : 2nd person : Sum
5 000 : 8 000 : (÷ 1 000)
5 : 8 : 13
? : ? : 3 900
The share of the 1st person
$= \frac{5 \times 3\,900}{13} = 1\,500$ pounds.
The share of the 2nd person
$= \frac{8 \times 3\,900}{13} = 2\,400$ pounds.

(3) The volume of the cube $= 12 \times 12 \times 12$
$= 1\,728\ cm^3$.
The volume of each ingot $= 3 \times 4 \times 6$
$= 72\ cm^3$.
The number of ingots $= 1\,728 \div 72 = 24$ ingots.

(4)




## 7 El-Sharkia

**1** (1) 3 000 (2) 7 (3) 100
(4) 2 : 3 (5) 6
(6) rectangle (7) 3 : 4 (8) 1 : 5
(9) minimization (10) 11
(11) 1 : 4 (12) length

**2** (1) 75 (2) 45 (3) 4
(4) 8 (5) 1 : 200 (6) 5 : 8
(7) 7 feddans/hr. (8) 3 : 10

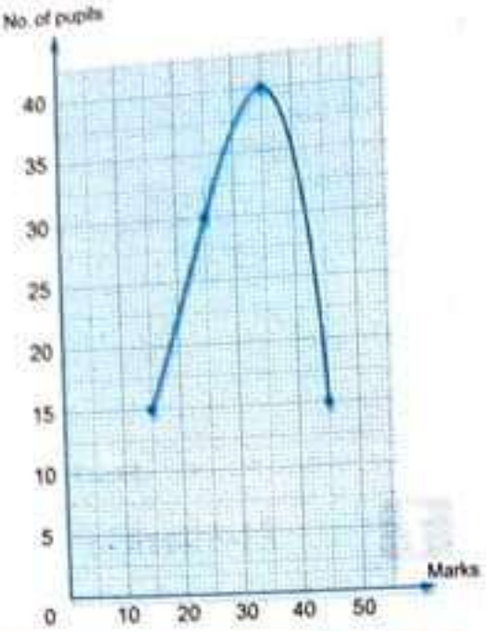
**3** (1) Buying price : Profit : Selling price
100 % : 10 % : 110 %
60 000 : : ?
The selling price $= \frac{110 \times 60\,000}{100}$
$=$ L.E. 66 000

(2) The number of bottles $= \frac{24 \times 1\,000}{400}$
$= 60$ bottles.

(3) [a] m (∠ D) = 130°
[b] m (∠ ACD) = 30°

(4) 1st angle : 2nd angle : 3rd angle : Sum
3 : 7 : 8 : 18
? : ? : ? : 180°
The measure of 1st angle $= \frac{3 \times 180°}{18}$
$= 30°$
The measure of 2nd angle $= \frac{7 \times 180°}{18}$
$= 70°$
The measure of 3rd angle $= \frac{8 \times 180°}{18}$
$= 80°$

(5)




## 8 El-Monofia

**1** (1) 5 : 8 (2) 65 (3) 6
(4) 200 (5) weight (6) 120
(7) 60 (8) 60 (9) 1 : 100
(10) 30 (11) square (12) 5 : 3
(13) 80

**2** (1) 125 (2) 28
(3) length in drawing , length in reality
(4) 41 (5) descriptive , quantitative
(6) 120° (7) 9 (8) 6

**3** (1) Length in drawing : Length in reality

| | | |
|---|---|---|
| 1 | : | 1 000 000 |
| ? | : | 20 km. |

The distance on the map
$= \frac{1 \times 20 \times 100\,000}{1\,000\,000} = 2$ cm.

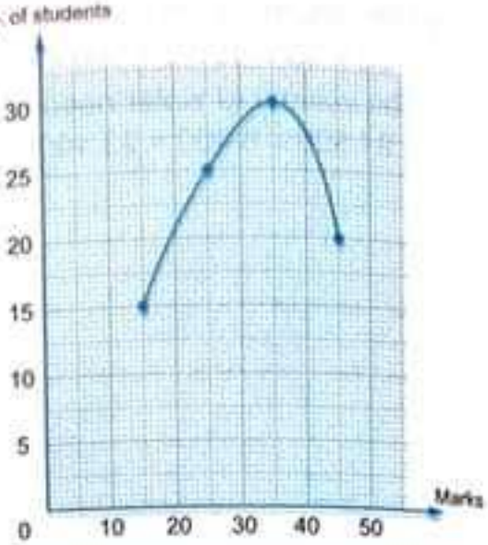
(2) Price before discount : Discount : Price after discount

| | | |
|---|---|---|
| 100 % | : 20 % : | 80 % |
| 2 500 | : : | ? |

The price after discount $= \frac{80 \times 2\,500}{100}$
= 2 000 pounds.

(3) The volume of cuboid = 36 × 42 × 24
= 36 288 $cm^3$.
The volume of each cube = 6 × 6 × 6
= 216 $cm^3$.
The number of cubes = 36 288 ÷ 216
= 168 cubes.

(4)




## 9 El-Dakahlia

**1** (1) 1.35 (2) equal in length
(3) $\frac{3}{4}$ (4) 50 : 1 (5) 8 : 9
(6) 45 (7) 12
(8) the length of the set (9) 7

**2** (1) 9.52 (2) age (3) >
(4) 1 331 (5) 2 : 5 (6) 4
(7) =

**3** (1) Buying price : Profit : Selling price

| | | | |
|---|---|---|---|
| 100 % | : 15 % : | 115 % |
| ? | : : | 2 300 |

The buying price $= \frac{100 \times 2\,300}{115}$
= L.E. 2 000

(2) Length + Width = 56 ÷ 2 = 28 cm.

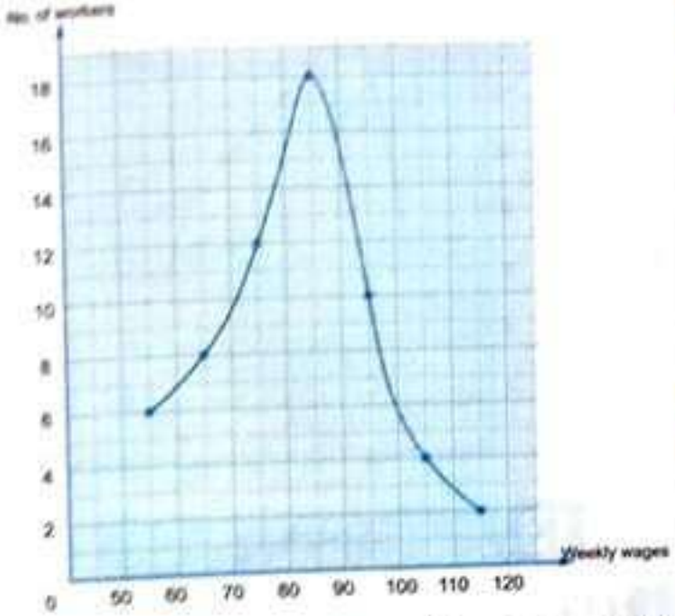
| Length | : | Width | : | Length + Width |
|---|---|---|---|---|
| 9 | : | 5 | : | 14 |
| ? | : | ? | : | 28 |

The length $= \frac{9 \times 28}{14} = 18$ cm.
The width $= \frac{5 \times 28}{14} = 10$ cm.
The area = 18 × 10 = 180 $cm^2$.

**4** (1) 65 (2) 7 (3) rectangle
(4) 4 : 1 (5) 28 (6) 16

**5** (1) [a] The capacity = 30 × 30 × 30
= 27 000 $cm^3$. = 27 L
[b] The price of oil = 27 × 9.5
= 256.5 pounds.

(2) [a]



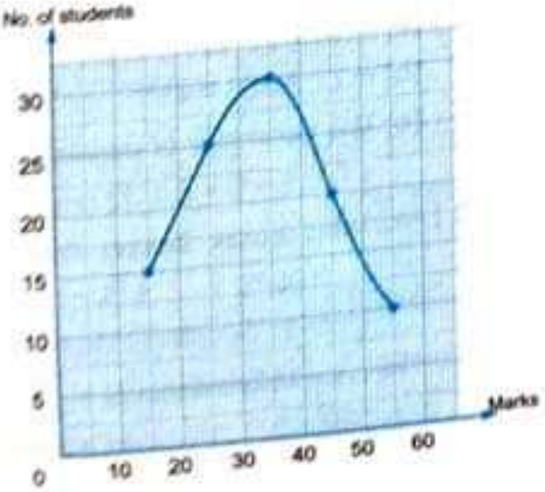

[b] The percentage = $\frac{6}{60} \times 100\ \% = 10\ \%$

## 10 Suez

1 (1) reduction (2) $\frac{1}{8}$ (3) ]
(4) 0.3 (5) 1 : 3
(6) the length of the set
(7) 8 : 9 (8) volume , height
(9) 3 papers/min.

2 (1) 20 (2) rectangle
(3) > (4) square
(5) 1 : 100 (6) 62.5 (7) 180°
(8) 4 000 (9) 30 (10) 54
(11) 22 : 7 (12) < (13) age

3 (1) The percentage = $\frac{13}{20} \times 100\ \% = 65\ \%$
(2) The edge length = 132 ÷ 12 = 11 cm.
The volume = 11 × 11 × 11 = 1 331 $cm^3$.
(3) m (∠ L) = 118° , m (∠ LXZ) = 27°
(4)




## 11 Port Said

1 (1) 6 (2) volume
(3) 3 : 8 (4) 5
(5) minimization
(6) 12 (7) rhombus
(8) 1 : 4 (9) 30
(10) 12 (11) rectangle
(12) age (13) 65 %

2 (1) 2 : 5
(2) base length × corresponding height
(3) 150 : 1 (4) 80
(5) 5 : 8 (6) 271
(7) 6 (8) 80° (9) 40

3 (1) The volume of the cube = 12 × 12 × 12
= 1 728 $cm^3$.
The volume of each ingot = 3 × 4 × 6
= 72 $cm^3$.
The number of ingots = 1 728 ÷ 72
= 24 ingots.

(2)

| 1st person | : | 2nd person | : | 3rd person | : | Sum |
|---|---|---|---|---|---|---|
| 15 000 | : | 25 000 | : | 20 000 | : | (÷ 1 000) |
| 15 | : | 25 | : | 20 | : | (÷ 5) |
| 3 | : | 5 | : | 4 | : | 12 |
| ? | : | ? | : | ? | : | 5 520 |

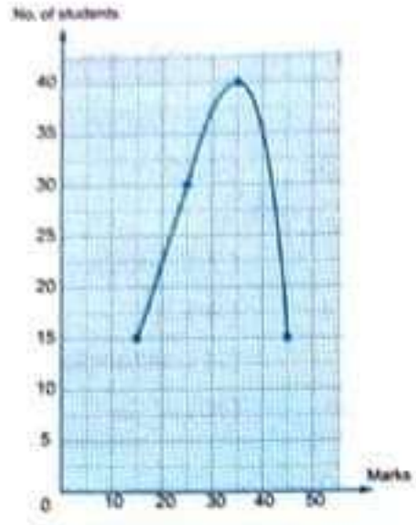
The share of the 1st person
$= \frac{3 \times 5\,520}{12} = 1\,380$ pounds.
The share of the 2nd person
$= \frac{5 \times 5\,520}{12} = 2\,300$ pounds.
The share of the 3rd person
$= \frac{4 \times 5\,520}{12} = 1\,840$ pounds.

(3)

| Price before discount | : | Discount | : | Price after discount |
|---|---|---|---|---|
| 100 % | : | 15 % | : | 85 % |
| ? | : | | : | 425 |

The price before discount
$= \frac{100 \times 425}{85} = 500$ pounds.

(4)




## 12 El-Menia

**1** (1) < (2) 7 (3) 12
(4) rectangle (5) age (6) 30
(7) 6 (8) 75 (9) 9 : 20
(10) 3 600 (11) 30 (12) 3 : 4

**2** (13) 1 : 4 (14) 4 000 (15) 27
(16) 1 : 9 (17) 7 (18) 4
(19) 60 (20) 1 : 100

**3** (21)

| Hani | : | Maged | : | Difference |
|---|---|---|---|---|
| 5 | : | 6 | : | 1 |
| ? | : | ? | : | 10 |

Hani's weight = $\frac{5 \times 10}{1}$ = 50 kg.

Maged's weight = $\frac{6 \times 10}{1}$ = 60 kg.

(22) Price before discount : Discount : Price after discount

| 100 % | : | 10 % | : | 90 % |
|---|---|---|---|---|
| ? | : | | : | 1 800 |

The price before discount = $\frac{100 \times 1\,800}{90}$
= L.E. 2 000

(23) The volume of the cube = 12 × 12 × 12
= 1 728 $cm^3$.

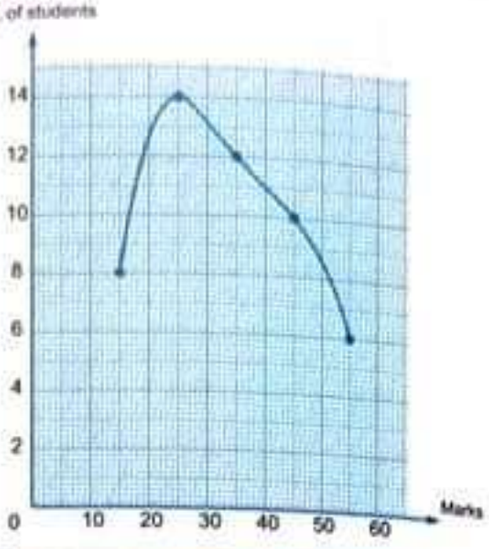
The volume of each ingot = 3 × 4 × 6
= 72 $cm^3$.

The number of ingots = 1 728 ÷ 72
= 24 ingots.

(24) [a] m (∠ C) = 110°

[b] The perimeter = (8 + 5) × 2 = 26 cm.

(25)




## 13 Souhag

**1** (1) $\frac{1}{4}$ (2) 25 $cm^2$. (3) 9
(4) 1 000 (5) rhombus (6) $4\frac{4}{5}$
(7) 5 (8) 90 (9) 1 728 $cm^3$.
(10) $\frac{2}{5}$ (11) < (12) 3 : 1
(13) age

**2** (1) 2.5 (2) hollow solid
(3) reduction
(4) with a right angle (5) 0.9
(6) 150 : 1 (7) Cube
(8) rhombus , square (9) 4

**3** (1) The rest = 17 – 5 = 12 kirats.

| Son | : | Daughter | : | Sum |
|---|---|---|---|---|
| 2 | : | 1 | : | 3 |
| ? | : | ? | : | 12 |

The share of the son = $\frac{2 \times 12}{3}$ = 8 kirats.

The share of the daughter = $\frac{1 \times 12}{3}$
= 4 kirats.

(2) [a] m (∠ D) = 100°

[b] m (∠ ACD) = 45°

[c] The perimeter of parallelogram
= 6 + 5 + 6 + 5 = 22 cm.

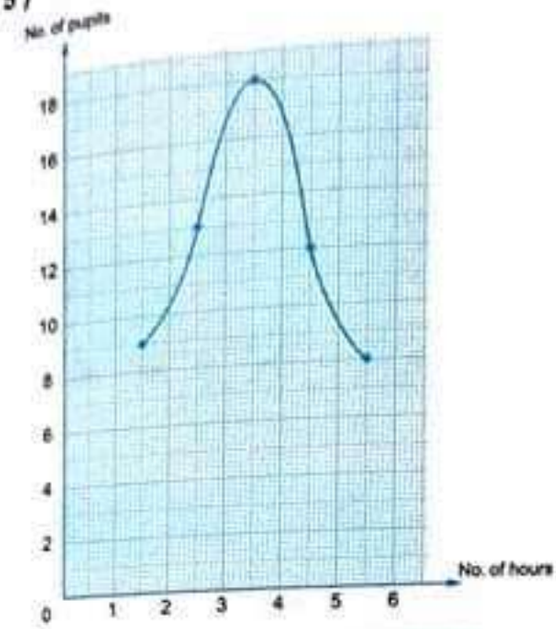
(3) Price before discount : Discount : Price after discount

| 100 % | : | 5 % | : | 95 % |
|---|---|---|---|---|
| ? | : | | : | 2 185 |

The price before discount = $\frac{100 \times 2\,185}{95}$
= 2 300 pounds.

(4) The rate for preparing one meal
$= \frac{20}{80} = \frac{1}{4}$ kg./meal.
The rate for preparing 4 meals $= \frac{1}{4} \times 4$
$= 1$ kg.

(5)




## 14 Luxor

1 (1) the minimum value
(2) base area , height
(3) 15 000 (4) rhombus , square
(5) 5 : 1 (6) 10 : 3
(7) 40 (8) 5 : 11
(9) length in drawing , length in reality

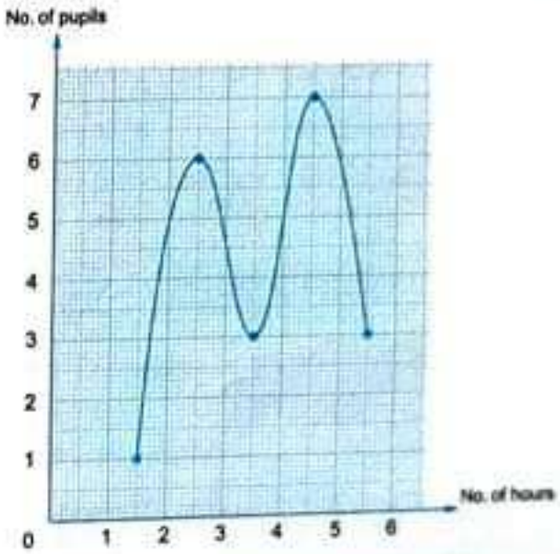
2 (1) rhombus (2) 10 : 23 (3) 3 cm.
(4) 4 : 1 (5) 45 (6) 46
(7) 10 L.E./day (8) 64
(9) age (10) 6 (11) >
(12) 55 000 (13) 6

3 (1) Length in drawing : Length in reality
1 : 1 500 000
3 : ?
The real distance $= \frac{3 \times 1\,500\,000}{1}$
$= 4\,500\,000$ cm.
$= 45$ km.

(2) 1st person : 2nd person : 3rd person : Sum
1 500 : 2 500 : 2 000 : (÷ 100)
15 : 25 : 20 : (÷ 4)
3 : 5 : 4 : 12
? : ? : ? : 6 000
The shere of the 1st person $= \frac{3 \times 6\,000}{12}$
$=$ L.E. 1 500
The shere of the 2nd person $= \frac{5 \times 6\,000}{12}$
$=$ L.E. 2 500
The shere of the 3rd person $= \frac{4 \times 6\,000}{12}$
$=$ L.E. 2 000

(3) [a] m (∠ ADC) = 80°
[b] The perimeter = (8 + 4) × 2 = 24 cm.

(4)




## 15 Aswan

1 (1) 1 : 3 (2) 15 (3) enlargement
(4) 3 : 4 (5) 8 (6) 3 000
(7) $\frac{3}{4}$ (8) 15 (9) rectangle
(10) 35 (11) 1 : 100 (12) age
(13) 30

2 (1) L.E. 1 875 (2) 15
(3) 210 (4) 5 : 6 (5) 60
(6) ○△□
(7) 4 (8) 80 (9) 30

# Some Governorates Examinations for the Year 2017

## 1 Cairo Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

[a] If $\frac{x}{8} = \frac{3}{4}$ , then $x$ = .....

[b] $\frac{2}{5}$ = ..... %

[c] The quadrilaterals in which its diagonals are equal in length and bisect each other are called ..... and .....

[d] The difference between the greatest value and the smallest value in a set of individuals is called .....



---

**2** ***Choose the correct answer from those given :***

[a] If the volume of a cuboid is 24 $cm^3$ and the area of its base is 6 $cm^2$ , then its height = ..... cm. ( 3 *or* 4 *or* 12 *or* 18 )

[b] The following data are descriptive except .....

( the colour *or* place of birth *or* age *or* blood species )

[c] 1 500 $cm^3$ = ..... litre ( 0.15 *or* 1.5 *or* 15 *or* 150 )

[d] If an agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of this machine is ..... feddans/hour

( $\frac{1}{4}$ *or* $2\frac{1}{2}$ *or* 4 *or* $10\frac{1}{2}$ )

---

**3** [a] If the distance between two cities on a map of drawing scale 1 : 500 000 equals 3 cm. Find the real distance between the two cities.

[b] The sum of the six faces areas of a cube is 54 $cm^2$.

Find : (1) Its edge length. (2) Its volume.

---

**4** [a] The number of pupils of a primary school in the first , the second and the third grades is 240 pupils , if the ratio among the three grades is 5 : 4 : 3 Calculate the number of pupils in each grade of them.

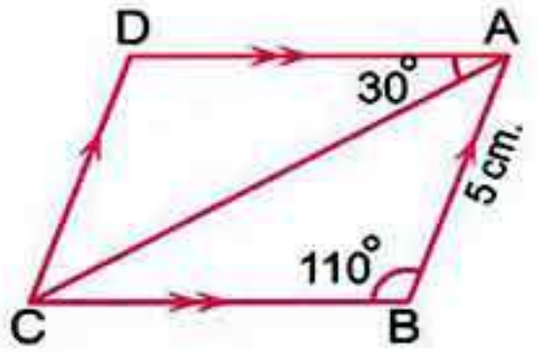
[b] Heba bought an electric sweeping machine for L.E. 425 with discount 15 % Calculate the original price of the sweeping machine before discount.

Final Examinations

**5** **[a]** ***In the opposite figure :***

ABCD is a parallelogram in which m (∠ B) = 110° , m (∠ DAC) = 30° and AB = 5 cm.

Find : **(1)** The length of $\overline{CD}$ **(2)** m (∠ BAC)




**[b]** ***The following table shows the marks of 100 pupils in mathematics :***

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Sum |
|---|---|---|---|---|---|---|
| Number of pupils | 15 | 25 | 30 | 20 | 10 | 100 |

**(1)** Draw the frequency curve for this distribution.

**(2)** What is the number of pupils who get 30 marks or more ?

## 2 Giza Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

**[a]** 1 – 30 % = .....

**[b]** If $\frac{2}{5} = \frac{x}{15}$ , then $x$ = .....

**[c]** The two diagonals are equal in length in each of ..... and .....

**[d]** If the drawing scale < 1 , this expresses .....

**2** ***Choose the correct answer :***

**[a]** If A : B = 2 : 5 , B : C = 5 : 9 , then A : C = .....

( 5 : 2 *or* 2 : 9 *or* 5 : 7 *or* 2 : 11 )

**[b]** The volume of the cube in which the sum of all its edge lengths is 36 = ..... $cm^3$.

( 27 *or* 63 *or* 72 *or* 108 )

**[c]** The range of the set of the values 7 , 3 , 6 , 9 and 5 is .....

( 3 *or* 4 *or* 6 *or* 12 )

**[d]** The opposite data are quantitative except the .....

( age *or* tallness *or* weight *or* favorite colour )

**3** **[a]** If the length of Suez Canal on a map of scale drawing 1 : 1 100 000 is 15 cm. , then find its real length in km.

**[b]** A water tap is leaking 20 litres of water in 5 hours. Find the leaking rate of water per hour (Please advise them).

**4** **[a]** A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

**[b]** In one of our schools , there are 560 students , if the number of girls = $\frac{3}{5}$ the number of boys. Find each of the number of boys and girls.

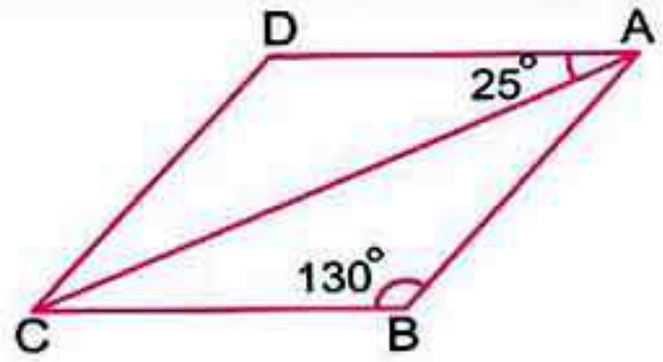
**5** **[a]** ***In the opposite figure :***

ABCD is a parallelogram in which

m (∠ B) = 130° and m (∠ DAC) = 25°

Find : **(1)** m (∠ D)

**(2)** m (∠ BAC)




**[b]** ***The following table shows sums of money in pounds was paid by a group of contributors in a goodness party :***

| The sum | 50 – | 60 – | 70 – | 80 – | 90 – | 100 – |
|---|---|---|---|---|---|---|
| No. of contributors | 5 | 7 | 10 | 12 | 10 | 7 |

**(1)** Draw the frequency curve of this distribution.

**(2)** What is the number of contributors by L.E. 80 and more ?

## 3 Alexandria Governorate (2017)

***Answer the following questions :***

**1** ***Choose the correct answer :***

**[a]** In the following , the smallest number is .....

( 0.5 *or* 0.25 *or* 0.125 *or* 0.375 )

**[b]** If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = ..... ( 6 *or* 21 *or* 12 *or* 7 )

**[c]** 4 200 000 $cm^3$ = ..... $m^3$ ( 42 *or* 420 *or* 4.2 *or* 4 200 )

**[d]** The opposite data are quantitative except .....

( tallness *or* age *or* number of sons *or* favorite food )

**2** ***Complete the following :***

**[a]** 56 days = ..... weeks.

**[b]** The ratio between $\frac{1}{2}$ kilogram and 700 grams = ..... : .....

**[c]** If the values of a frequency distribution lie between (20 , 60) , then the range of this distribution = .....

**[d]** If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called .....

Final Examinations

**3** **[a]** In a class of a primary (mixed school) the number of boys = $\frac{4}{5}$ the number of girls , if the number of boys is 16 pupils , what is the number of the pupils in the class ?

**[b]** Ahmed drew a picture to his brother Osama with a drawing scale 1 : 40 If the real height of Osama is 160 cm. What is his height in the picture ?

---

**4** **[a]** Find the buying price of goods sold for L.E. 21 520 and the percentage of profit is 15 % and find the profit.

**[b]** A cube of metal its edge length equals 12 cm. need to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of alloys that can be obtained.

---

**5** **[a]** A cube-shaped vessel , its internal edge length is 30 cm. , it is filled with food oil :

**(1)** Calculate the capacity of food oil.

**(2)** If the price of one litre of food oil is 9.5 pounds. Calculate the price of all oil.

**[b]** ***The following table shows the marks of 100 pupils in math exam :***

| Sets | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Frequency | 15 | 25 | 30 | 20 | 10 | 100 |

Draw the frequency curve for this distribution.

## 4 El-Kalyoubia Governorate (2017)

***Answer the following questions :***

**1** ***Complete the following :***

**[a]** If $\frac{a}{b} = \frac{4}{7}$ , $\frac{b}{c} = \frac{7}{9}$ , then a : b : c = ..... : ..... : .....

**[b]** A water tap is leaking 360 litres of water in an hour , then the leaking rate of water per minute = ..... litres/minute

**[c]** The ratio between $2\frac{1}{4}$ km. and 125 m. = ..... : .....

**[d]** The circumference of a circle = .....

---

**2** ***Choose the correct answer :***

**[a]** If $\frac{x + 12}{8} = 2$ , then $x$ = ..... ( 6 *or* 4 *or* 8 *or* 16 )

**[b]** If the perimeter of a cube base is 36 cm. , then its volume = ..... $cm^3$.

( 36 *or* 6 *or* 729 *or* 216 )

**[c]** 25 % of 1 000 = 50 % of .....

( 2 000 *or* 1 500 *or* 1 250 *or* 500 )

**[d]** If the real length of a tree is 6 m. and its drawing length is 3 cm. , then the drawing scale = .....

( 1 : 100 *or* 1 : 200 *or* $\frac{1}{300}$ *or* 1 : 600 )

---

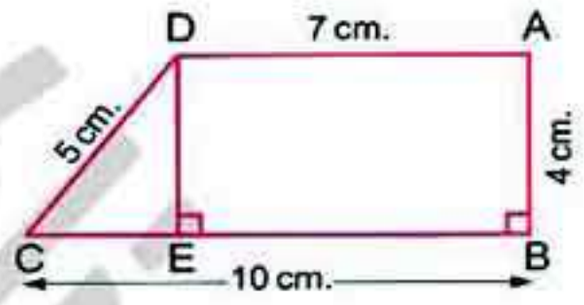
**3** **[a]** The ratio between the height of a building and the height of a tower is $\frac{4}{20}$ If the height of the building is 36 metres , find the height of the tower.

**[b]** A model for a football playground is drawn with a drawing scale 1 : 500 , if the dimensions of the playground in the model are 2 cm. and 4 cm.
Find : **(1)** The real dimensions of this playground in metres.
**(2)** The real area of this playground.

---

**4** **[a]** ***In the opposite figure :***

ABCD is a trapezium in which m(∠ B) = 90°
, AD = 7 cm. , AB = 4 cm. , BC = 10 cm.
, DC = 5 cm. and ABED a rectangle , complete :




**(1)** AB = ..... = ..... cm.

**(2)** EC = ..... cm.

**(3)** The perimeter of the triangle DEC = ..... cm.

**[b]** A swimming pool is in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

---

**5** **[a]** ABC is a right-angled triangle at B , if the ratio between the measures of the angles A and C is 2 : 3 , find the measure of each of the two angles.

**[b]** ***The following table shows the temperature degrees expected for 30 cities in one of the summer days :***

| Temperature degree | 24 – | 28 – | 32 – | 36 – | 40 – | 44 – | Total |
|---|---|---|---|---|---|---|---|
| Number of cities | 3 | 4 | 7 | 9 | 5 | 2 | 30 |

Draw the frequency curve of the previous table.

## 5 El-Sharkia Governorate (2017)

***Answer the following questions :***

**1** ***Choose the correct answer :***

[a] The rhombus has ..... lines of symmetry.
( zero *or* 1 *or* 2 *or* 4 )

[b] If the ratio 7 : 13 is the same ratio $x$ : 52 , then $x$ = .....
( 14 *or* 21 *or* 28 *or* 35 )

[c] The opposite data are descriptive except .....
( the favorite colour *or* birth place *or* blood species *or* age )

[d] 1.45 litre + 0.5 $dm^3$ + 50 $cm^3$ = ..... litres
( 51.95 *or* 2 *or* 2.45 *or* 3 )

---

**2** ***Complete the following :***

[a] If 945 = (A × 100) + 45 , then A = .....

[b] The ratio between 12 kirats and $1\frac{1}{2}$ feddan (in the simplest form) is ..... : .....

[c] If 87 is the greatest individual of a set and the range = 39 , then the smallest individual of this set equals .....

[d] The volume of a cuboid equals 400 $cm^3$ and its base is of length = 8 cm. and width = 5 cm. , then its height equals ..... cm.

---

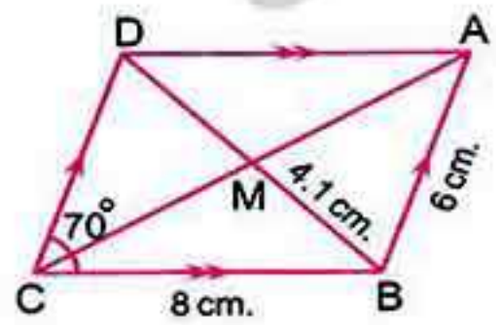
**3** [a] A man distributed 6 300 pounds between his three sons , if the share of the first was third of the money and the ratio between the share of the second and the third is 3 : 2 Calculate the share of each of them.

[b] If the distance between two cities is 180 km. and the drawing scale is 1 : 9 000 000 How long is the distance between the two cities on the map ?

---

**4** [a] Nahed bought a computer for L.E. 4 500 and the discount was 10 % Calculate the original price of the computer before discount.

[b] ***In the opposite figure :***
ABCD is a parallelogram in which AB = 6 cm. , BC = 8 cm. , BM = 4.1 cm. and m (∠ C) = 70°
Without using geometrical instruments ,
find : m (∠ ADC) , the perimeter of Δ BCD



**5** **[a]** The sum of the lengths of all edges of a cube is 132 cm.
Calculate its volume.

**[b]** ***The following table shows the marks of 90 students in maths test :***

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 90 |

Draw the frequency curve for this data.

## 6 El-Monofia Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Choose the correct answer from those given :***

**[a]** 2.8 $dm^3$ = ..... litres ( 2.8 **or** 28 **or** 2 800 **or** 28 000 )

**[b]** If $\frac{3}{4} = \frac{x}{20}$ , then $5x$ = ..... ( 15 **or** 20 **or** 75 **or** 5 )

**[c]** The sum of the two numbers X and Y is 20 , then Y = .....
( 20 + X **or** 20 – X **or** X – 20 **or** $\frac{X}{20}$ )

**[d]** From the quantitative data is .....
( the favourite colour **or** favourite food **or** the age **or** social case )

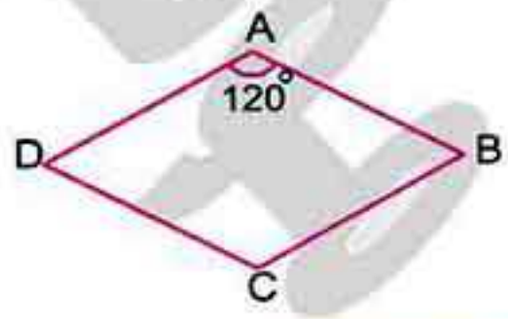
**2** ***Complete the following :***

**[a]** A machine produces 240 pieces of certain materials in 3 hours , then the rate of production of the machine = ..... pieces/hour

**[b]** If the values of a frequency distribution the between (10 , 50) , then the range of this distribution = .....

**[c]** The triangle whose side lengths are 7 cm. , 7 cm. and 7 cm. is .....

**[d]** **In the opposite figure :**
ABCD is a rhombus
in which m (∠ A) = 120°
, then m (∠ B) = .....




**3** **[a]** A garden in the shape of a square of side length 50 metres. It is drawn with a drawing scale 1 : 1 000
Find its area on the drawing in $cm^2$.

Final Examinations

[b] Maher bought a car for L.E. 49 000 and he spent L.E. 1 000 for repairing it , then the sold it for L.E. 55 000 Calculate the percentage of profit.

**4** [a] Find the volume of the cube in which the sum of lengths of all its edges is 36 cm.

[b] If the ratio between Ahmed's money and Mohamed's money is 7 : 4 and if Ahmed's money exceeds Mohamed's money by L.E. 60 Find the money with each of them.

**5** [a] A cuboid its base is a square-shaped whose perimeter is 20 cm. and its height is 7 cm. Calculate its volume.

[b] ***On the orphan day , a group of students donated amounts of money in pounds shown in the following table :***

| Money in pounds | 3 – | 5 – | 7 – | 9 – | 11 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 7 | 10 | 15 | 10 | 8 | 50 |

(1) What is the number of students who donated by 9 pounds and more ?

(2) Draw the frequency curve for this frequency distribution.

## 7 El-Gharbia Governorate (2017)

***Answer the following questions :***

**I** ***Choose the correct answer from those given :***

[a] The ratio between 3 feddans and 40 kirats equals .....

( $\frac{3}{4}$ or $\frac{5}{9}$ or $\frac{9}{5}$ or $\frac{4}{3}$ )

[b] If $\frac{5}{9} = \frac{15}{x}$ , then $x$ = ..... ( 3 or 5 or 15 or 27 )

[c] If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then its is called .....

( rhombus or square or triangle or rectangle )

[d] The range of the set of values 5 , 4 , 8 , 12 and 7 is .....

( 8 or 7 or 5 or 4 )

**2** ***Complete :***

[a] $\frac{2}{5}$ + 30 % = ..... %

[b] The volume of a cuboid equals 400 $cm^3$ , its length is 8 cm. and its width is 5 cm. , then its height = ..... cm.

[c] If the length in the drawing is 2 cm. and the real length is 20 metres. , then the drawing scale equals 1 : .....

[d] All the following data [volume , area , length , blood type] are quantitative except .....

**3** [a] If the ratio between Ahmed's money and Omar's money is 9 : 13 , if the sum with them is 440 pounds. Find the money with each of Ahmed and Omar.

[b] 10 litres of water were poured in a pot in the shape of a cuboid , its base is in the form of a square , its side length from the inside is 25 cm. Find height of the water in the pot.

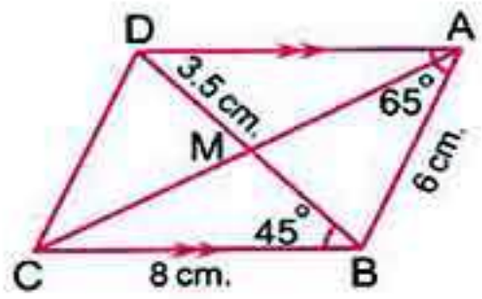
**4** [a] Abeer bought a TV set for 1 800 pounds and the discount was 10 % Calculate the original price of the TV set before discount.

[b] ***In the opposite figure :***

m (∠ BAD) = 65° , m (∠ DBC) = 45°

, AB = 6 cm. , CB = 8 cm. and MD = 3.5 cm.

Calculate without using measuring tools :




(1) m (∠ ABD) (2) m (∠ ADC) (3) Perimeter of Δ ABD

**5** [a] If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. Find its the real length in kilometres.

[b] ***The following table shows the marks of 50 students in English exam :***

| Marks | 0 – | 5 – | 10 – | 15 – | 20 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 4 | 8 | 20 | 12 | 6 | 50 |

(1) Draw the frequency curve.

(2) How many students who record less than 10 marks ?

## 8 El-Dakahlia Governorate (2017)

***Answer the following questions :***

**1** ***Complete the following :***

[a] The capacity is .....

[b] A square , the length of its diagonal is (10 cm.) , then its area = ..... $cm^2$.

[c] If (A is half B) and (B is twice C) , then A : C = ..... : .....

[d] The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

Final Examinations

**2** ***Choose the correct answer :***

**[a]** The opposite data are descriptive except .....

( the favorite colour **or** birthday **or** age **or** blood species )

**[b]** 75 % litre + 25 % $dm^3$ = .....

( 10 litre **or** 1 000 $cm^3$ **or** 100 $dm^3$ **or** 100 $cm^3$ )

**[c]** A cube , its volume is $\frac{1}{8}$ $cm^3$ , then the perimeter of one face = ..... cm.

( $\frac{1}{2}$ **or** 8 **or** 4 **or** 2 )

**[d]** 263.5 cm. ≃ ..... metres (to the nearest metre)

( 26 350 **or** 264 **or** 3 **or** 260 )

---

**3** **[a]** The ratio between the length of a rectangle to its width equals 7 : 4 , its perimeter is 44 cm. Find the length and the width of the rectangle. Then calculate its area.

**[b]** Aquarium in the shape of cuboid , the inner dimensions of its base are 20 cm. , 15 cm. , if 12 litres of water was poured in it.

Find the depth of the water.

---

**4** **[a]** The height of a minaret is 45 metres and the length of its shadow in a moment equals 24 meters. What is the height of a tree if the length of its shadow equals 8 metres in the same moment ?

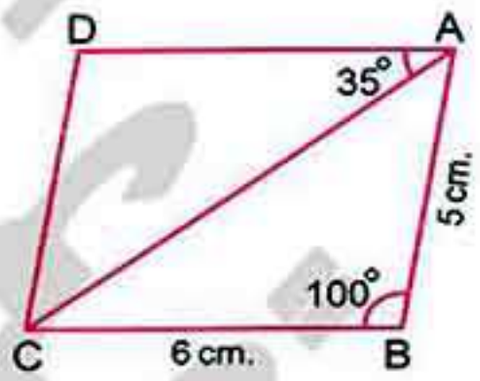
**[b]** ***In the opposite figure :***

ABCD is a parallelogram in which AB = 5 cm. , BC = 6 cm. , m (∠ B) = 100° and m (∠ DAC) = 35°

Without using measuring tools , find :

**(1)** m (∠ D) **(2)** m (∠ ACD)

**(3)** The perimeter of parallelogram.

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**5** **[a]** The owner of a bookshop sold 25 % of notebooks and the remainder was 60 notebooks. How many notebooks were there first ?

**[b]** ***The following table shows the degrees of (60) students in one month in math :***

| Marks | 10 – | 20 – | $x$ – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 10 | 15 | 25 | 10 | 60 |

**(1)** Find the value of $x$

**(2)** Draw the frequency curve for that distribution.

## 9 Ismailia Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

[a] The rhombus becomes a square if its diagonals are .....

[b] If the drawing length equals 5 cm. and the real length equals 30 metres , then the drawing scale is ..... : ..... (in the simplest form)

[c] If the lower limit of the set = 10 and the upper limit = 20 , then its centre = .....

[d] The circumference of a circle = $\pi \times$ .....

**2** ***Choose the correct answer from those between brackets :***

[a] If $\frac{x}{21} = \frac{2}{7}$ , then $x - 3$ = ..... ( 6 or 4 or 3 or 2 )

[b] The range of the set of values 4 , 7 , 3 and 9 is ..... ( 12 or 6 or 5 or 3 )

[c] The volume of a cuboid its height = 3 cm. and surface area of its base = 12 $cm^2$ is ..... ( 36 $cm^3$ or 4 $cm^3$ or 36 $cm^2$ or 4 $cm^2$ )

[d] The lowest common multiple of 6 and 9 is ..... ( 3 or 6 or 9 or 18 )

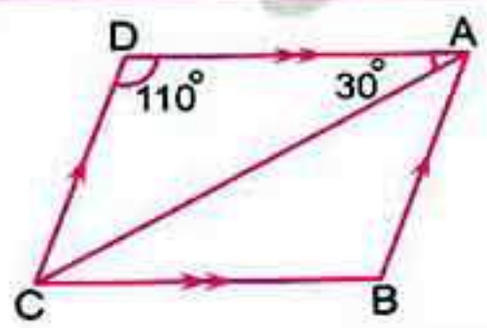
**3** [a] Ahmed spends L.E. 45 in 5 days.
Calculate the rate of spending in one day.

[b] The owner of one of electrical appliances sold a refrigerator for 3 180 pounds. If the percentage of his profit is 6 %
Find the buying price of the refrigerator.

**4** [a] A cube the perimeter of its base = 40 cm. Find its volume.

[b] Three persons shared in a trade. The first paid 50 000 pounds and the second paid 40 000 pounds and the third paid 30 000 pounds , at the end of the year the profit was 36 000 pounds. Find the share of each in profit.

**5** [a] ***In the opposite figure :***
ABCD is a parallelogram in which m (∠ D) = 110°
and m (∠ CAD) = 30° Find :
(1) m (∠ CAB) (2) m (∠ B)



Final Examinations

**[b]** ***The following table shows the marks of 100 pupils in mathematics :***

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 15 | 35 | 25 | 15 | 10 | 100 |

**(1)** Draw the frequency curve for this distribution.

**(2)** Calculate the number of pupils who got less than 30 marks.

## 10 Suez Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

**[a]** 8 hours : $\frac{1}{2}$ day = ..... : ..... (in the simplest form)

**[b]** If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = .....

**[c]** 4 $m^3$ = ..... $dm^3$

**[d]** The two diagonals are equal in length in each of ..... and .....

---

**2** ***Choose the correct answer from those given :***

**[a]** 0.03 < ..... ( 0.02 *or* 0.1 *or* 0.009 *or* 0.011 )

**[b]** Ahmed bought a car at the price L.E. 60 000 and he sold it with profit 5 % , then the selling price of the car is .....

( L.E. 61 000 *or* L.E. 62 000 *or* L.E. 63 000 *or* L.E. 65 000 )

**[c]** The volume of a cuboid whose dimensions are 2 cm. , 3 cm. and 5 cm. = ..... ( 30 cm. *or* 30 $cm^2$ *or* 30 $cm^3$ *or* 10 $cm^3$ )

**[d]** The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

( 9 *or* 3 *or* 6 *or* 7 )

---

**3** **[a]** An agricultural machine ploughs 6 feddans at 3 hours.
Find the rate of performance of this machine per hour.

**[b]** Three persons set up a commercial business , the first paid $\frac{3}{4}$ what the second paid , the second paid $\frac{2}{3}$ what the third paid , at the end of the year the profit became L.E. 6 240
Calculate the share of each of them from profit.

**4** **[a]** The sum of lengths of all edges of a cube is 36 cm. Calculate its volume.

**[b]** ***The following table shows the marks of 100 students in one month in math :***

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 15 | 25 | 30 | 20 | 10 | 100 |

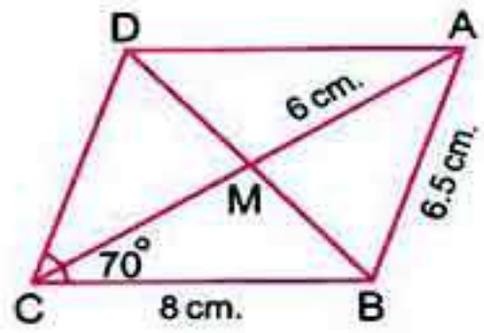
Draw the frequency curve for this distribution.

**5** **[a]** If the distance between two cities is 180 km. and the drawing scale is 1 : 900 000 How long is the distance between the two cities on the map ?

**[b]** ***In the opposite figure :***

ABCD is a parallelogram in which AB = 6.5 cm. , BC = 8 cm. , AM = 6 cm. , m (∠ C) = 70°

Without using geometrical instruments , find :




**(1)** m (∠ ABC) **(2)** The length $\overline{AC}$ **(3)** The perimeter of Δ ABC

## 11 Port Said Governorate (2017)

***Answer the following questions :***

**1** ***Complete the following :***

**[a]** 8 765 × ..... = 876.5

**[b]** The length of set = ..... ÷ the number of sets

**[c]** The cube each two adjacent faces intersect at a line segment which is called .....

**[d]** The ratio between 18 months and 3 years = ..... : .....
(in the simplest form)

**2** ***Choose the correct answer from those given :***

**[a]** 7 ..... {17 , 707} ( ⊂ *or* ⊄ *or* ∈ *or* ∉ )

**[b]** 6.7 $dm^3$ = ..... litres ( 67 *or* 6.7 *or* 670 *or* 6 700 )

**[c]** The opposite data are quantitative except .....
( age *or* height *or* the favorite colour *or* weight )

**[d]** If $\frac{18}{x}$ = 20 % , then $x$ = ..... ( 90 *or* 100 *or* 120 *or* 190 )

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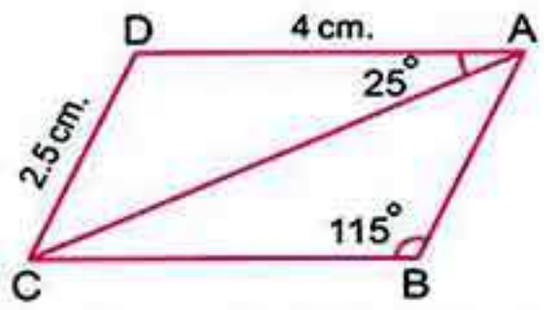
**3** **[a]** A family spends L.E. 450 in 5 days.
What is the rate of what the family spends per day ?

**[b]** A metallic cube of edge length 18 cm. , it needs to be converted into ingots in the shape of cuboids each of them has the dimensions 3 cm. , 6 cm. and 9 cm. Calculate the number of ingots that are obtained.

**4** **[a]** Find the buying price of goods sold for L.E. 17 250 and the percentage of profit is 15 %

**[b]** ***In the opposite figure :***
ABCD is parallelogram in which m (∠ B) = 115°
, m (∠ DAC) = 25° , AD = 4 cm. and CD = 2.5 cm.
Find : The length of $\overline{BC}$ , m (∠ D) , m (∠ ACD)




**5** **[a]** The distance between Port Said and Ismailia on a map of drawing scale 1 : 1 000 000 equals 9 cm. Find the real distance.

**[b]** ***The following table shows the degrees of 100 students in one month in math :***

| Sets | 10 – | 20 – | 30 – | 40 – | 50 – 60 | Total |
|---|---|---|---|---|---|---|
| Frequency | 15 | 25 | 30 | 20 | 10 | 100 |

**(1)** Draw the frequency curve for this distribution.
**(2)** What is the number of students who record less than 30 degrees ?

## 12 Damietta Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

**[a]** The difference between the greatest value and the smallest value in a set of individuals is called .....

**[b]** The two diagonals bisects each other and equal in length in ..... and .....

**[c]** If $x$ , 18 , 6 and 9 are proportional , then $x$ = .....

**[d]** The volume of a cube whose sum of lengths of its edges is 36 cm. equals ..... $cm^3$.

**2** ***Choose the correct answer from those given :***

**[a]** 6 500 $dm^3$ = ..... $m^3$ ( 65 000 *or* 650 *or* 65 *or* 6.5 )

**[b]** If the drawing length is 2 cm. and the real length is 20 m. , then the drawing scale is ..... ( 1 : 10 *or* 1 : 100 *or* 1 : 1 000 *or* 1 : 10 000 )

**[c]** A rectangle of length double its width , then the ratio between width and its perimeter equals ..... ( 1 : 6 *or* 1 : 3 *or* 1 : 2 *or* 2 : 1 )

**[d]** An agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of the machine in feddan per one hour is .....

( $\frac{1}{2}$ *or* 4 *or* 8 *or* 49 )

---

**3** **[a]** The ratio between the heights of two buildings is 4 : 7 , if the difference between their heights is 9 metres. Find the height of each building.

**[b]** A tank in the shape of a cuboid whose dimensions are 7 m. , 5 m. and 9 m. Find the volume of water which fill its third.

---

**4** **[a]** Three persons participated in a commercial project , the first paid $\frac{3}{4}$ of what second paid and the second paid $\frac{2}{3}$ of what third paid. At the end of the year the profit was L.E. 6 240

Calculate the share of each of them.

**[b]** Heba bought an electric sweeping machine for L.E. 221 , if the discount was 15 %

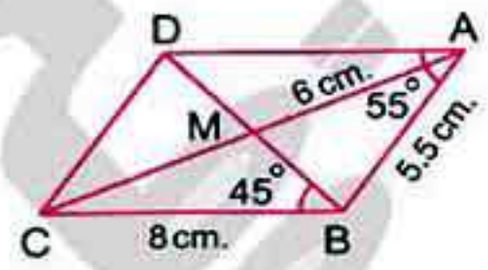
Calculate the original price of the sweeping machine before discount.

---

**5** **[a]** ***In the opposite figure :***

ABCD is a parallelogram where AB = 5.5 cm. , BC = 8 cm. , AM = 6 cm. , m (∠ BAD) = 55° , m (∠ DBC) = 45° Without measuring , find :

**(1)** m (∠ ABD) **(2)** Perimeter of Δ ACD




**[b]** ***On the orphan day a group of students donated amounts of money in pounds in the following table :***

| Money in L.E. | 3 – | 5 – | 7 – | 9 – | 11 – | Total |
|---|---|---|---|---|---|---|
| Number of students | 7 | 10 | 15 | 10 | 8 | 50 |

**(1)** Represent this data by the frequency curve.

**(2)** What is the number of students who donated by 9 pounds and more ?

Final Examinations

## 13 Kafr El-Sheikh Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

[a] The area of triangle = .....

[b] A cube , its perimeter of the base is 36 cm. , then its volume = ..... $cm^3$.

[c] The ratio between 0.75 kirat : 16 sahms = ..... : ..... in the simplest form

[d] If $\{3 , 6\} = \{9 - x , 3\}$ , then $x$ = .....

---

**2** ***Choose the correct answer from those given :***

[a] The range of the set of values 7 , 3 , 6 , 9 , 5 equals .....

( 3 *or* 4 *or* 6 *or* 17 )

[b] The length of an insect in the picture is 4 cm. and its real length is 2 millimetres , then the drawing scale is .....

( 1 : 20 *or* 1 : 80 *or* 20 : 1 *or* 80 : 1 )

[c] 4.6 liter = ..... mL. ( 46 *or* 460 *or* 4 600 *or* 46 000 )

[d] The opposite data are descriptive except .....

( the favorite colour *or* the birth place *or* the age *or* the blood species )

---

**3** [a] If the ratio between dimensions of rectangle is 3 : 4 and its perimeter equals 140 cm. , find its area.

[b] Find the cost price of goods sold for 21 275 pounds , with profit percentage 15 % and find the value of the profit.

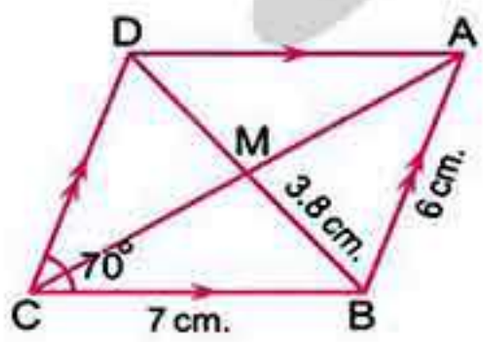
---

**4** [a] A piece of building land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 square metre. Find the area of the land.

[b] ***In the opposite figure :***

ABCD is a parallelogram in which AB = 6 cm. , BC = 7 cm. , BM = 3.8 cm. and m (∠ C) = 70° , without using geometrical instruments find :

(1) m (∠ ADC) (2) The perimeter of Δ BCD



**5** **[a]** A swimming pool , its internal dimensions are 30 , 15 and 2 metres , if 405 $m^3$ of water are poured into it

Find the height of water in the swimming pool in centimetres.

**[b]** ***The following table shows the degrees of 100 students in one month in maths :***

| Marks | 20 – | 30 – | 40 – | 50 – | Sum |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

**(1)** Draw the frequency curve for this distribution.

**(2)** ***Complete :*** The ordered pair which represent the set 50 – is .....

## 14 El-Beheira Governorate (2017)

***Answer the following questions :***

**I** ***Choose the correct answer :***

**[a]** The centimetre cube is a unit for measuring .....

( the perimeter *or* the area *or* the volume *or* the length )

**[b]** If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measure for the smallest angle equals .....

( 10° *or* 30° *or* 45° *or* 60° )

**[c]** The diagonals are perpendicular in each of .....

( square and rectangle *or* rhombus and rectangle *or* square and rhombus *or* parallelogram and rectangle )

**[d]** ..... is quantitative data. ( The favourite colour *or* The birth place *or* The blood species *or* The age )

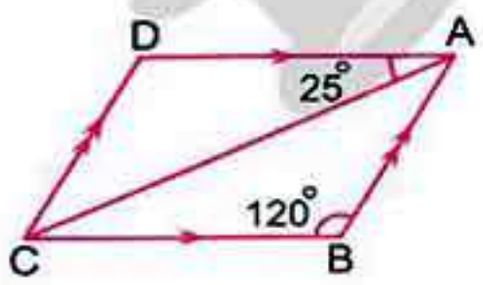
**2** ***Complete the following statements :***

**[a]** 62.5 % = $\frac{\text{.....}}{8}$

**[b]** 3 litres = ..... $cm^3$

**[c]** **In the opposite figure :**

ABCD is a parallelogram , m (∠ BAC) = ..... °




**[d]** If the marks of 5 pupils in one in the tests are 29 , 33 , 57 , 40 , 36 , then the range for these marks is equal to .....

Final Examinations

**3** **[a]** Two machines for the manufacture of cloth. The first produces 500 metres of cloth in two hours and the second produces 600 metres of cloth in $2\frac{1}{2}$ hours. Which of the two machines is more efficient ?
(Determine the steps of solution)

**[b]** Atlas of a number of cities drawn at a scale of 1 : 100 000 , if the real distance between the two cities is 36 km. , find the drawing distance between them in this atlas.

---

**4** **[a]** A man died and left a piece of land for building , its area is 17 kirats. He recommended for building on orphan house on area equals 5 kirats. The remainder is distributed between his son and his daughter in the ratio 2 : 1 Calculate the share of each of them from the land.

**[b]** A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

---

**5** **[a]** A glass vessel is cubed-shaped , its inner edge length is 30 cm. This vessel contains an amount of water. If we throw a metallic piece in it , then the water level raised 5 cm. because of that. Find the volume of the metallic piece.

**[b]** ***The following frequency distribution table represents the daily wages of a sample formed from 50 workers in a factory :***

| Wages | 10 – | 20 – | 30 – | 40 – | 50 – | 60 – | 70 – 80 | Total |
|---|---|---|---|---|---|---|---|---|
| Number of workers | 4 | 6 | 10 | 14 | 8 | 5 | 3 | 50 |

**(1)** Draw the frequency curve.

**(2)** Find the percentage of the number of workers whose wages are less than L.E. 40

## 15 El-Fayoum Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete each of the following :***

**[a]** The ratio between 18 kirats : $\frac{1}{2}$ feddan = ..... : .....
(in the simplest form)

**[b]** The sum of measures of the interior angles of a triangle = .....°

**[c]** A vase in the shape of a cube the length of its interior edge equals 20 cm. , then its capacity = ..... litres.

[d] If the values of a frequency distribution lie between (20 , 60) , then the range of this distribution = .....

**2** ***Choose the correct answer from those between brackets :***

[a] If $\frac{5}{9} = \frac{15}{x}$ , then $x$ = ..... ( 3 **or** 5 **or** 15 **or** 27 )

[b] $\{3 , 5\} \cap \{4 , 5\}$ = ..... ( $\{3\}$ **or** $\{5\}$ **or** $\{4\}$ **or** $\{3 , 4 , 5\}$ )

[c] The opposite data are quantitive data except .....

( the length **or** the age **or** the birth place **or** the weight )

[d] If the volume of the cuboid equals 400 $cm^3$ and the area of its base equals 50 $cm^2$ , then its height = ..... cm.

( 8 **or** 80 **or** 40 **or** 50 )

**3** [a] A map is drawn with a scale 1 : 200 000 , if the distance between two cities on this map is 8 cm. Find the real distance between the two cities in kilometers.

[b] Osama bought a car in the price L.E. 60 000 and he sold it with profit 5 % Find the selling price of the car

**4** [a] If the ratio between the share of Hany and the share of Sherif and the share of Khalid is 3 : 5 : 7 and if the share of Hany is L.E. 24 Calculate the share of each of Sherif and Khalid.

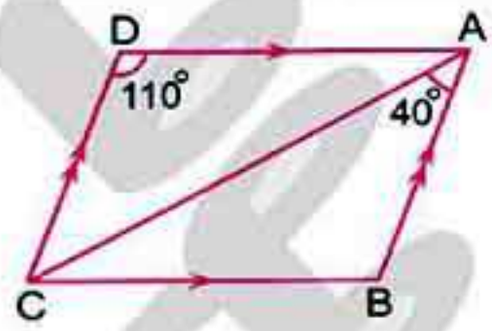
[b] A cube of metal its edge length equals 12 cm. need to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of alloys that can be obtained.

**5** [a] ***In the opposite figure :***

ABCD is a parallelogram in which

m ($\angle$ D) = 110° , m ($\angle$ BAC) = 40°

Find : m ($\angle$ B) , m ($\angle$ DAC)




[b] ***The following table shows the marks of 50 pupils in mathematics exam :***

| The marks | 15 – | 20 – | 25 – | 30 – | 35 – | Total |
|---|---|---|---|---|---|---|
| No. of pupils | 8 | 12 | 14 | 10 | 6 | 50 |

Draw the frequency curve for this distribution.

Final Examinations

## 16 Beni Suef Governorate (2017)

***Answer the following questions :***

**1** ***Complete the following :***

[a] The area of a rectangle = ..... × .....

[b] If $\frac{3}{4} = \frac{x}{12}$ , then $x$ = .....

[c] 5 + 5 + 5 + 5 = 5 × ..... = .....

[d] If the values of a frequency distribution lie between (90 , 30) , then the range of this distribution = .....

---

**2** ***Choose the correct answer from those given between brackets :***

[a] The sum of the measures of any two consecutive angles in a parallelogram = .....° ( 90 *or* 360 *or* 180 *or* 108 )

[b] The side length of a square = 4 cm. , then the ratio between its side length and its perimeter = ..... ( 4 : 1 *or* 1 : 3 *or* 3 : 1 *or* 1 : 4 )

[c] A cuboid its volume is 400 $cm^3$ , its length is 8 cm. and its width is 5 cm. , then its height = ..... cm. ( 8 *or* 5 *or* 10 *or* 4 )

[d] The opposite data are descriptive except .....
( the favourite colour *or* the birth place *or* the age *or* the blood type )

---

**3** [a] A factory produces 1 000 juice cans in 4 hours , calculate its production rate per hour.

[b] A man deposit L.E. 9 000 in a bank and the percentage of interest 10% per year. What is the amount of this sum after one year ?

---

**4** [a] The sum of edges length of a cube is 36 cm. Find volume of this cube.

[b] Atlas of a number of cities drawn at a scale of 1 : 200 000 , if the real distance between the two cities is 48 km. Find the distance between them in this atlas.

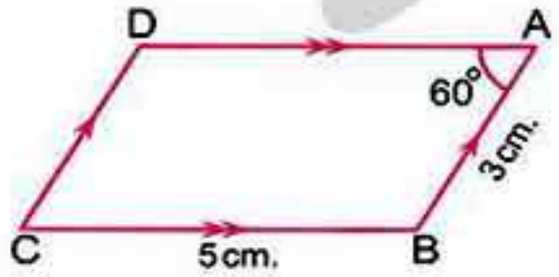
---

**5** [a] ***In the opposite figure :***

ABCD is a parallelogram in which AB = 3 cm. , BC = 5 cm. and m (∠ A) = 60° Find :

(1) m (∠ C)

(2) The perimeter of parallelogram ABCD



**[b] *The following table shows the marks of 100 pupils in maths :***

| The sets | 10 – | 20 – | 30 – | 40 – | Sum |
|---|---|---|---|---|---|
| The frequency | 25 | 30 | 25 | 20 | 100 |

Draw the frequency curve for this data.

## 17 El-Menia Governorate (2017)

***Answer the following questions :***

**1 *Choose the correct answer from those given :***

[a] 500 gm. : $1\frac{1}{2}$ kg. = ..... : .....

( 1 : 6 *or* 1 : 5 *or* 1 : 4 *or* 1 : 3 )

[b] If the sum of the edges length of a cube equals 24 cm.
, then its volume = ..... $cm^3$. ( 8 *or* 12 *or* 64 *or* 128 )

[c] 2.7 ÷ 0.09 = ..... ( 3 *or* 30 *or* 0.3 *or* 0.03 )

[1] Which of the following data is countable ?
( the favorite colour *or* the place of birth *or* the age *or* the blood species )

**2 *Complete the following :***

[a] The two diagonals are perpendicular in each of ..... and .....

[b] Three tenths of a number = ..... %

[c] The range of the set of values : 5 , 7 , 3 , 9 , 11 = .....

[d] 6.284 × 10 = .....

**3** [a] If the ratio between the dimensions of rectangle is 3 : 4 and its perimeter equals 70 cm. Find its area.

[b] Ahmed draws a picture to his brother Osama with a drawing scale 1 : 40 , if the real height of Osama is 160 cm.
What is his height in the picture ?

**4** [a] If the cost price of a set of electric appliances is 60 000 pounds and it is sold at 12% profit. Calculate the selling price.

[b] A cube of cheese its edge length is 15 cm. it needs to be divided it into small cubes the edge length of each is 3 cm. for presenting them through meals. Calculate the number of resulting small cubes.

Final Examinations

**5** **[a]** A juice case in the shape of cuboid , its base is square-shaped of side length 6 cm. and its height is 15 cm. Calculate the volume of juice which fills the case completely.

**[b]** ***On the orphan day a group of students denoted amounts of money in pounds shown in the following table :***

| Money in pounds | 3 – | 5 – | 7 – | 9 – | 11 – | Sum |
|---|---|---|---|---|---|---|
| Number of students | 7 | 10 | 15 | 10 | 8 | 50 |

**(1)** What is the number of students who denoted by 7 pounds and more ?

**(2)** Draw the frequency curve for this distribution.

## 18 Assiut Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Choose the correct answer from those given :***

**[a]** If $\frac{7}{13} = \frac{x}{52}$ , then $x$ = ..... ( 14 *or* 21 *or* 28 *or* 25 )

**[b]** 39 days ≃ ..... weeks. ( 5 *or* 6 *or* 7 *or* 8 )

**[c]** The opposite data are descriptive except .....

( the favorite colour *or* the birthday *or* the age *or* the blood species )

**[d]** 18 kirats : 2 feddans = ..... (in the simplest form).

( 3 : 4 *or* 4 : 3 *or* 9 : 2 *or* 3 : 8 )

---

**2** ***Complete the following :***

**[a]** $2\frac{3}{4} \div 1\frac{3}{8}$ = .....

**[b]** If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called .....

**[c]** An agricultural machine ploughs 14 feddans in 3.5 hours. , then the rate of performance of the machine in feddan per hour is .....

**[d]** The range of the set of values 7 , 3 , 6 , 9 is .....

---

**3** **[a]** Two wire pieces , the ratio between their length is 5 : 9 , if the sum of their lengths is 126 metres. Calculate the length of each piece.

**[b]** A picture was take to an artificial scene with a drawing scale 1 : 100 If the real length of a tree is 18 metres , find its length in the picture.

**4** **[a]** A swimming pool , its internal dimensions are 30 , 15 and 2 metres. 405 $m^3$ of water are poured into it. Find :

**(1)** The height of water in the swimming pool.

**(2)** The volume of water which is needed to fill the swimming pool completely.

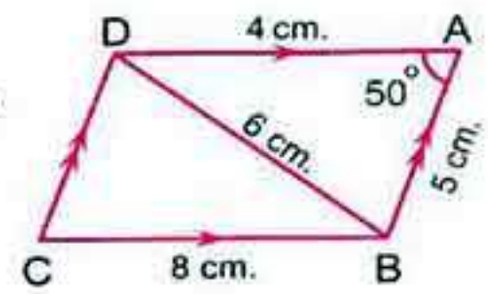
**[b]** ***In the opposite figure :***

ABCD is a parallelogram in which

AB = 5 cm. , BC = 8 cm. , BD = 6 cm. , m (∠ A) = 50°

Without using geometrical instruments , find :

**(1)** m (∠ ADC) **(2)** The perimeter of Δ BCD




**5** **[a]** A piece of building land is distributed between brothers in the ratio 7 : 5 If the share of the first one exceeds the share of the second by 80 square meter. Find the area of the land and the share of each of the first and the second.

**[b]** ***The following table shows the age of visitors to an exhibition within an hour of the day :***

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | The sum |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

Draw the frequency curve for this distribution.

## 19 Souhag Governorate (2017)

***Answer the following questions :***

**1** ***Complete the following :***

**[a]** The two diagonals are equal in length in each of ..... and .....

**[b]** The ratio between 250 gm. : $\frac{3}{4}$ kg. = ..... : .....

**[c]** If the numbers 4 , $x$ , 12 and 18 are proportional then $x$ = .....

**[d]** If the values of a frequency distribution lie between 20 , 60 , then the range of this distribution = .....

**2** ***Choose the correct answer :***

**[a]** The circumference of circle = ..... ( $2\pi r$ *or* $\pi r^2$ *or* $\pi r$ *or* $3r$ )

**[b]** The opposite data are descriptive except .....

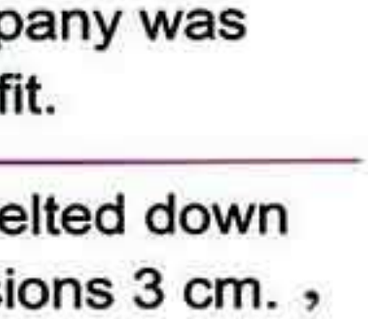
( the favourite colour *or* the birth place *or* the blood species *or* the age )

Final Examinations

[c] The side length of a square is 3 cm. , then the ratio between its length and its perimeter equals ..... ( 4 or 3 or $\frac{1}{4}$ or $\frac{1}{3}$ )

[d] **In the opposite figure :**

The number of parallelograms which can be obtained is ..... ( 4 or 5 or 7 or 9 )



---

**3** [a] If the drawing scale which is registered on a map is 1 : 500 000 and the distance between two cities on this map is 3 cm. Find the real distance between them in kilometres.

[b] Hany , Samy and Khaled started a trade business. Hany paid 30 000 pounds. Samy paid 40 000 pounds and Khaled paid 50 000 pounds. At the end of the year the profit of the company was 6 000 pounds. Find the share of each of them from the profit.

---

**4** [a] A cube of metal its edge length equals 9 cm. need to be melted down and converted into alloys in the form of cuboid with dimensions 3 cm. , 3 cm. and 1 cm. Calculate the number of alloys that can be obtained.

[b] Find the buying price of goods sold for 23 000 pounds with profit percentage 15% and find the profit.

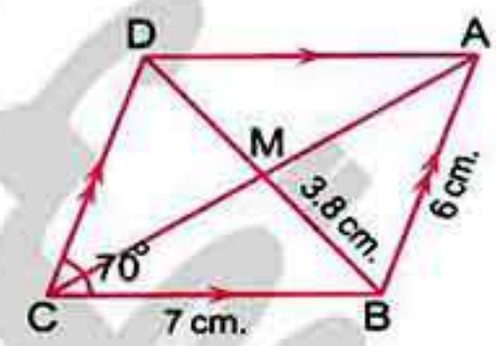
---

**5** [a] ***In the opposite figure :***

ABCD is a parallelogram in which AB = 6 cm. , BC = 7 cm. , MB = 3.8 cm. and m (∠ C) = 70°

Without using measuring tools , calculate :

(1) m (∠ ADC) (2) The perimeter of Δ BCD




[b] ***The following table shows the ages of visitors to an exhibition within an hour of the day :***

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

(1) What is the number of visitors whose ages are less than 40 years ?

(2) Draw the frequency curve for this distribution.

## 20 Qena Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Choose the correct answer :***

[a] The following data are quantitative except .....
( the age *or* the blood species *or* the number of children *or* the weight )

[b] If an angle in a parallelogram is right and two adjacent sides are equal in length , then it is called .....
( rhombus *or* triangle *or* square *or* rectangle )

[c] If the values of a frequency distribution lie between 20 and 60 , then the range of this distribution is ..... ( 40 *or* 80 *or* 60 *or* 100 )

[d] 4.6 litres = ..... mL. ( 46 *or* 460 *or* 46 000 *or* 4 600 )

---

**2** ***Complete the following :***

[a] If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = .....

[b] The ratio between the side length of a square and its perimeter = ..... : .....

[c] $\frac{9}{20}$ = .....%

[d] If the base of a cuboid is on the shape of a square of side length 10 cm. and its height of 7 cm. , then its volume = .....

---

**3** [a] A tractor ploughs 6 feddans in three hours , if another tractor ploughed 10 feddans in 4 hours , which of them is more efficiency.

[b] A cube-shaped vessel is full of oil , its inner edge is 30 cm.

(1) Calculate its capacity in litres.

(2) Calculate the price of oil if the price of one litre = 10 pounds.

---

**4** [a] A picture was taken to a building with a drawing scale 1 : 1 000 , if the height of that building in the picture is 3 cm. , then find its real length.

[b] A metallic cube its edge length is 12 cm. is melted and converted into ingots in the shape of cuboids each of them has the dimensions 3 cm. , 4 cm. and 6 cm. Find the number of ingots that are obtained.

Final Examinations

**5** **[a]** A piece of building land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 square metres , find the area of the land and the share of each of them.

**[b]** ***The following table shows the marks of 100 pupils in a month :***

| Marks | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|
| Number of pupils | 15 | 30 | 40 | 15 | 100 |

**(1)** How many pupils get less than 40 degrees ?

**(2)** Draw the frequency distribution.

## 21 Luxor Governorate (2017)

***Answer the following questions :***

**I** ***Choose the correct answer :***

**[a]** If the numbers 4 , $x$ , 12 , 18 are proportional quantities , then $x$ = ..... ( 3 *or* 6 *or* 9 *or* 12 )

**[b]** The measure of the straight angle = .....° ( 90 *or* 180 *or* 360 *or* 120 )

**[c]** The range of the values 1 , 3 , 4.4 , 5 is ..... ( 1 *or* 3 *or* 4 *or* 5 )

**[d]** A cube of volume 125 $cm^3$ , its base area = ..... ( 25 $cm^2$ *or* 25 cm *or* 5 $cm^2$ *or* 5 cm )

---

**2** ***Complete the following :***

**[a]** 16 kirats : 1 feddan = .....

**[b]** The following data (age , length , weight , blood type) are quantitative except .....

**[c]** 3 litres = ..... $cm^3$

**[d]** The four sides are equal in length in ..... and .....

---

**3** **[a]** Ahmed bought a flat for L.E. 150 000 and sold it with loss 5 % Find the selling price of the flat.

**[b]** If the drawing scale of a picture of one building is 1 : 1 000 and if the height of the building in the picture is 3 cm. , find the real height in metres.

4 [a] If the ratio between the length of two roads is 2 : 5 and the difference between their lengths is 21 km. , find the length of each road.

[b] A container in the shape of a cube its inner edge length is 20 cm. , full of honey. If the price of each litre of honey is 8 pounds , find the price of the honey in container.

5 [a] A cartoon box in the shape of a cuboid , its inner dimensions are 50 cm. , 40 cm. and 30 cm. it is wanted to fill it with tea boxes each in the shape of a cuboid of dimensions 10 cm. , 5 cm. and 6 cm. , calculate the number of tea boxes which fill completely the cartoon box.

[b] ***The following table represents the marks of 100 students in math's test :***

| Marks | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 30 | 40 | 15 | 100 |

(1) Represent these data by the frequency curve.

(2) What is the number of students who got less than 40 marks ?

## 22 Aswan Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

1 ***Choose the correct answer :***

[a] $\frac{1}{2}$ = ..... ( 0.5 *or* 0.2 *or* 0.1 *or* 0.05 )

[b] 300 gm. : 1 $\frac{1}{2}$ kg. = ..... ( 1 : 3 *or* 1 : 5 *or* 1 : 10 *or* 1 : 30 )

[c] If one the angles of parallelogram is right and two adjacent sides are equals in length is called .....

( rhombus *or* rectangle *or* triangle *or* square )

[d] The opposite data are quantitative except the .....

( age *or* tallness *or* favourite colour *or* weight )

2 ***Complete the following :***

[a] 5 $cm^3$ = ..... mL.

[b] 48.684 ≃ ..... (to nearest hundredth)

[c] If the values of a frequency distribution lie between (20 , 60) , then the range = .....

[d] If $\frac{x}{3}$ = 9 % , then $x$ = .....

Final Examinations

**3** **[a]** The price of buying refrigerator is L.E. 2 400 and price of selling is L.E 2 640 Calculate the percentage of profit.

**[b]** If the distance between two cities on map is 10 cm. and the real distance between them is 120 km. Find the drawing scale of this map.

---

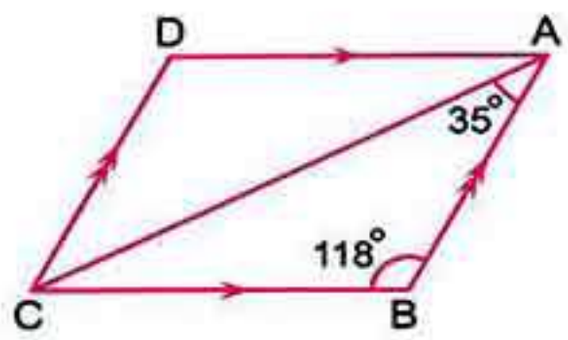
**4** **[a]** A case in the shape of a cuboid , its base is a square-shaped of side length 6 cm. and its height is 10 cm. Calculate its volume.

**[b]** ***In the opposite figure :***

ABCD is parallelogram where

m (∠ B) = 118° , m (∠ BAC) = 35°

Find : m (∠ D) , m (∠ DAC)

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**5** **[a]** If the ratio between the measures angles of triangle is 5 : 6 : 7 and the measure of the smallest angle is 50°

Find the measure of each of the other two angles.

**[b]** ***The following table shows the marks of 100 pupils in math exam :***

| Marks | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of pupils | 15 | 25 | 30 | 20 | 10 | 100 |

**(1)** Calculate the number of pupils who got 30 marks or more.

**(2)** Draw the frequency curve for this distribution.

## 23 South Sinai Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**I** ***Complete the following :***

**[a]** 18 kirats : 2 feddans = ..... : ..... (in the simplest form)

**[b]** In the quadrilaterals , the two diagonals are equal in length in each of ..... and .....

**[c]** The difference between the greatest and the smallest value in set of individuals is called .....

**[d]** The smallest prime number is .....

**2** ***Choose the correct answer from those given answers :***

**[a]** If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = ..... ( 6 *or* 7 *or* 12 *or* 21 )

**[b]** The opposite data are descriptive except .....

( the favorite colour *or* the birth place *or* the age *or* the blood species )

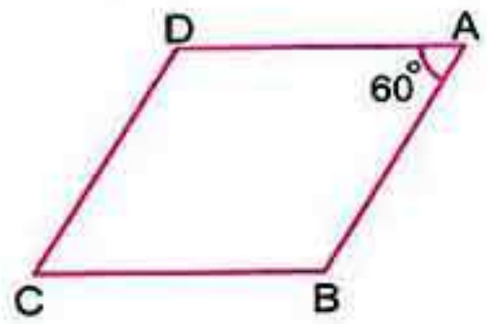
**[c]** Number of edges of a cuboid = ..... edges. ( 4 *or* 6 *or* 8 *or* 12 )

**[d]** **In the opposite figure :**

ABCD is a parallelogram

, m (∠ A) = 60°

, then m (∠ B) = .....




( 30° *or* 60° *or* 90° *or* 120° )

---

**3** **[a]** A cubic vessel of internal edge length 30 cm.

Calculate the capacity of the vessel in litres.

**[b]** If the distance between two cities is 180 km. and the drawing scale is 1 : 9 000 000

How long is the distance between the two cities on the map ?

---

**4** **[a]** A shop keeper for electric sets sold a refrigerator for L.E. 3 180

If the percentage of his profit is 6 % Find the buying price.

**[b]** A primary school has 540 pupils if the ratio between the number of boys to the number of girls is 4 : 5 Calculate the number of each boys and girls.

---

**5** **[a]** Find the volume of a cuboid in which the area of its base is 16 $cm^2$ and of height 9 cm.

**[b]** ***The following table shows the degree of 100 students in one month in math :***

| Marks | 10 – | 20 – | 30 – | 40 – | Total |
|---|---|---|---|---|---|
| Number of students | 15 | 25 | 45 | 15 | 100 |

Draw the frequency curve for this distribution.

Final Examinations

## 24 Red Sea Governorate (2017)

***Answer the following questions :***

**1** ***Choose the correct answer :***

**[a]** 42 000 $cm^2$ = ..... $m^2$ ( 42 *or* 420 *or* 4.2 *or* 4 200 )

**[b]** If the numbers 4 , $x$ , 12 , 18 were in proportion , then the value of $x$ = ..... ( 6 *or* 9 *or* 15 *or* 18 )

**[c]** If the sum of the edge lengths of a cube equals 60 cm. , then its volume equals ..... $cm^3$

( 1 000 *or* 343 *or* 216 *or* 125 )

**[d]** The following data are descriptive except .....

( the place of birth *or* the blood species *or* the age *or* the favorite colure )

---

**2** ***Complete the following :***

**[a]** The two diagonals are perpendicular in each of ..... , .....

**[b]** If the values of a frequency distribution lie between (30 , 50) , then the range of this distribution = .....

**[c]** A factory produce 8 000 bottles of soft drink in 16 hour , then the rate of production per hour = ..... bottle/hour

**[d]** 45 days ≃ ..... to the nearest week.

---

**3** **[a]** Two lorries , the load of the first is 600 kg. and the load of other is 1.5 ton , find the ratio between the load of the first to the load of the second in the simplest from. (ton = 1 000 kg.)

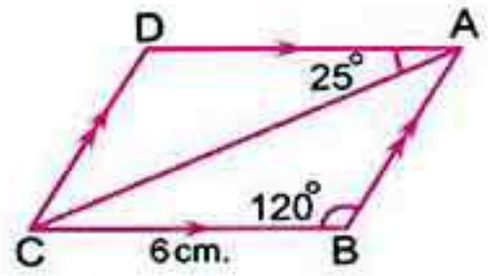
**[b]** If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. Find its real length in kilometres.

---

**4** **[a]** A company for selling the electric sets it shows TV set for L.E 2 200 If the percentage of the profit is 10 % Find the buying price of TV set

**[b]** A cuboid of volume is 4 800 $cm^3$ and the area of its base is 240 $cm^2$ Find its height.

**5** **[a]** The opposite figure shows a parallelogram in which m (∠ B) = 120° , m (∠ DAC) = 25° and BC = 6 cm.




Calculate without using measuring tools each of :

**(1)** m (∠ D)

**(2)** m (∠ BAC)

**(3)** The length of $\overline{AD}$



**[b]** ***The following table shows the age of visitors to an exhibition within an hour of the day :***

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Sum |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

Draw the frequency curve for this distribution.

## 25 Matrouh Governorate (2017)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

**[a]** The volume of the cube = .....

**[b]** $1\frac{3}{4}$ = ..... %

**[c]** $\frac{1}{4} + \frac{3}{4}$ = .....

**[d]** The difference between the greatest value and the smallest value in a set of individuals is called .....

**2** ***Choose the correct answer :***

**[a]** If $\frac{2}{7} = \frac{x}{21}$ , then $x$ = ..... ( 6 *or* 21 *or* 12 *or* 7 )

**[b]** 3 ..... {1 , 2 , 3 , 4} ( $\subset$ *or* $\not\subset$ *or* $\in$ *or* $\notin$ )

**[c]** In the parallelogram , the sum of the measures of any two consecutive angles = ..... ( 160° *or* 280° *or* 180° *or* 120° )

**[d]** The opposite data are descriptive except .....

( the favorite colour *or* the birthday *or* the age *or* the blood species )

**Final Examinations**

**3** **[a]** The ratio between the lengths of two roads is 2 : 5 and the difference between their lengths is 21 km. Find the length of each road.

**[b]** Find the buying price of goods sold for L.E. 41 400 and the percentage of profit is 15% and find the profit.

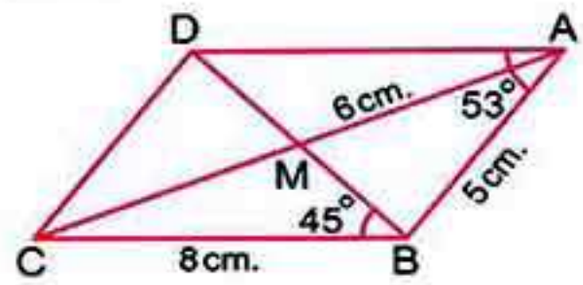
---

**4** **[a]** A container has 12 litres of honey , it is wanted to put them in smaller vessels (bottles) the capacity of each of them is 400 $cm^3$.
Calculate the number of bottles which is needed for that.

**[b]** ***In the opposite figure :***

$m(\angle A) = 53°$ , $m(\angle DBC) = 45°$

, AM = 6 cm. , AB = 5 cm. , BC = 8 cm.




Calculate without using measuring tools each of :

**(1)** $m(\angle ABD)$

**(2)** $m(\angle D)$

**(3)** The length of $\overline{AC}$

---

**5** **[a]** A macket of a playground of a school is drawn is drawn with drawing scale 1 : 500 the dimensions of the playground in the picture were 2 cm. and 4 cm. Find the real dimensions of the playground in metre.

**[b]** ***The following table shows the number of hours which the pupils of a class spend daily in front of the computer :***

| **Number of hours** | 1 – | 2 – | 3 – | 4 – | 5 – | 6 – | **Total** |
|---|---|---|---|---|---|---|---|
| **Number of pupils** | 7 | 11 | 15 | 6 | 4 | 2 | **45** |

Represent these data by frequency curve.

# Some Governorates Examinations for the Year 2016

## 1 Cairo Governorate (2016)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

**[a]** 0.4 : 0.8 = ..... : ..... (in the simplest form)

**[b]** The range of set of the these values : 20 , 95 , 70 and 45 equals .....

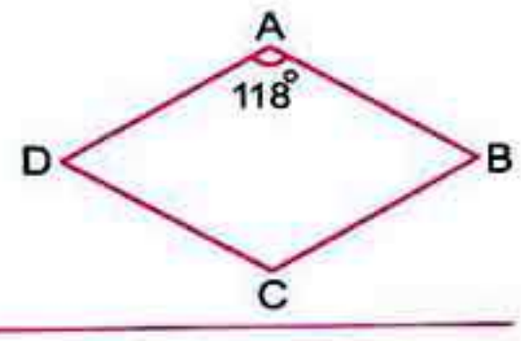
**[c]** If the quantities : $x$ , 6 , 20 and 30 are in proportion , then $x$ = .....

**[d]** **In the opposite figure :**

ABCD is a rhombus in which

m ($\angle$ A) = 118°

, then m ($\angle$ B) = .....°

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**2** ***Choose the correct answer from those given :***

**[a]** The cuboid has ..... edges. ( 12 **or** 8 **or** 6 **or** 4 )

**[b]** The given data are quantitative except the .....

( weight **or** length **or** nationality **or** age )

**[c]** 1.2 litres + 800 $cm^3$ = ..... litres. ( 2 **or** 9.2 **or** 200 **or** 2 000 )

**[d]** If 100 grams of chocolate give 300 calories. What is the number of calories which are found in 30 grams of the same chocolate ?

( 90 **or** 100 **or** 900 **or** 9 000 )

---

**3** **[a]** If the length of Suez Canal in a map of drawing scale 1 : 1 100 000 is 15 cm. , then find its real length in kilometres.

**[b]** Three persons involved in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000
At the end of the year the profit was L.E. 20 700
Find the share of each person in profit.

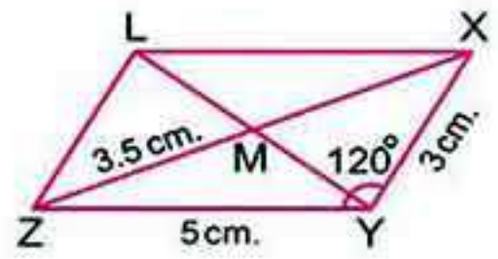
---

**4** **[a]** A man bought a flat for L.E. 100 000 , after three years he sold it for L.E. 130 000 Find the percentage of his profit.

Final Examinations

[b] ***In the opposite figure :***

XYZL is a parallelogram in which
m (∠ XYZ) = 120° , XY = 3 cm.
, YZ = 5 cm. and ZM = 3.5 cm.
Find : (1) m (∠ XLZ)
(2) The perimeter of the triangle XLZ

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**5** [a] A container contains 12 litres of honey. It is wanted to pour it in small bottles , the capacity of each of them is 400 $cm^3$.
Calculate the number of bottles which are needed for that.

[b] ***The following table shows the marks of 100 pupils in mathematics in a month :***

| The marks | 20 – | 30 – | 40 – | 50 – 60 | Total |
|---|---|---|---|---|---|
| Number of pupils | 10 | 30 | 40 | 20 | 100 |

Draw the frequency polygon for this distribution.

## 2 Giza Governorate (2016)

***Answer the following questions : (Calculator is allowed)***

**1** ***Complete the following :***

[a] If $\frac{x}{27} = \frac{2}{3}$ , then $x$ = .....

[b] The volume of a cube of edge length 3 cm. = ..... $cm^3$.

[c] The ratio between the side length of a square and its perimeter = ..... : .....

[d] The range of the set of the values : 7 , 3 , 6 , 9 and 5 is .....

---

**2** ***Choose the correct answer :***

[a] $\frac{3}{4}$ litre = ..... $cm^3$. ( 250 *or* 500 *or* 750 *or* 900 )

[b] 20 % from 40 kg. = ..... kg. ( 4 *or* 8 *or* 12 *or* 16 )

[c] The opposite data are descriptive except the .....
( favorite colour *or* birth place *or* age *or* blood species )

[d] If one angle in a parallelogram is right , then it is called .....
( rhombus *or* trapezium *or* triangle *or* rectangle )

3 [a] Find the volume of a cuboid with dimensions 12 cm. , 10 cm. , 8 cm.

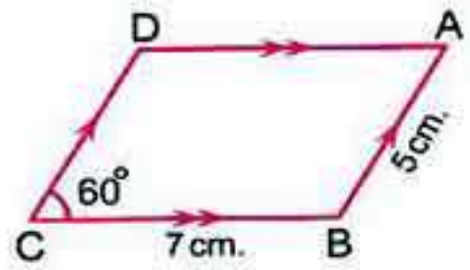
[b] Find the buying price of goods sold for L.E. 21 520 and the percentage of profit is 15 % , and find the profit.

4 [a] Omar took a magnified picture with a camera. If the length of an insect in the picture is 10 cm. and its real length is 2 mm. Find the drawing scale.

[b] A load of apple fruit weights 280 kg. is distributed among three merchants.
The share of the first = $\frac{2}{3}$ the share of the second and the share of the second = $\frac{4}{5}$ the share of the third.
Calculate the share of each of them from this load.

5 [a] ***In the opposite figure :***

ABCD is a parallelogram in which , AB = 5 cm. , BC = 7 cm. , m (∠ C) = 60° Find :




(1) m (∠ A) (2) m (∠ D)

(3) The perimeter of the parallelogram ABCD

[b] ***The following table shows the degrees of 100 students in maths test :***

| Marks | 20 – | 30 – | 40 – | 50 – | Sum |
|---|---|---|---|---|---|
| Number of students | 15 | 20 | 50 | 15 | 100 |

Represent these data by the frequency curve.

## 3 Alexandria Governorate (2016)

***Answer the following questions :***

**I** ***Complete the following :***

[a] 12 × (350 + .....) = ..... × 350 + 12 × 220

[b] If the length of an insect in the picture is 10 cm. and its real length is 2 mm. , then the drawing scale = ..... : 1

[c] 4.63 litre = ..... $cm^3$.

[d] $\frac{\text{The range}}{\text{The length of the set}}$ = .....

Final Examinations

**2** ***Choose the correct answer from those given :***

**[a]** If $\{3 , 5\} \subset \{3 , 7 , x\}$ , then $x$ = ..... ( 5 *or* 9 *or* 6 *or* 15 )

**[b]** The following data are quantitative except .....

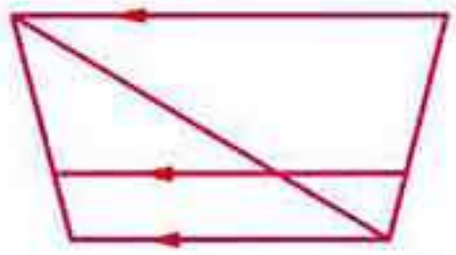
( age *or* weight *or* the favourite colour *or* tallness )

**[c]** If a : b = 2 : 3 , b : c = 3 : 5 , then a : c = .....

( 8 : 15 *or* 2 : 5 *or* 4 : 9 *or* 3 : 10 )

**[d] In the opposite figure :**

The number of trapezoids is .....



( 3 *or* 4 *or* 2 *or* 5 )

---

**3** **[a]** The ratio between the length of a rectangle to its width equals 7 : 4 , its perimeter is 44 metres. Find the length and the width of the rectangle and calculate its area.

**[b]** A tank in the shape of a cuboid of dimensions 7 m. , 5 m. and 9 m. What is the volume of water which fills its third ?

---

**4** **[a]** Two machines for the manufacture of cloth , the first produces 500 metres of cloth in two hours and the second produces 600 metres of cloth in 2 hours and half.

Which of the two machines is more efficient ?

**[b]** A company for electrical appliances displays the TV set for 1 026 pounds. If the company sold it with profit percentage is 14 % Find the buying price for the TV set.

---

**5** **[a]** A cube of clay of edge length 8 cm. Cubes of edge length of each = 2 cm. are made of it. Find the number of these cubes.

**[b]** ***The following table shows the age of visitors to an exhibition within an hour of the day :***

| Visitor's age | 10 – | 20 – | 30 – | 40 – | 50 – | Total |
|---|---|---|---|---|---|---|
| Number of visitors | 6 | 9 | 12 | 10 | 8 | 45 |

(1) What is the number of visitors whose ages are less than 40 years ?

(2) Draw the frequency curve for this distribution.

## 4 El-Kalyoubia Governorate (2016)

***Answer the following questions :***

**1** ***Complete the following :***

[a] The ratio between 18 kirats and $1\frac{1}{2}$ feddans = ..... : .....

[b] If the marks of 4 pupils in a maths test are 22 , 39 , 62 , 54 , then the range of the marks = .....

[c] If 2 , $x$ , 8 , 20 are proportional , then $x$ = .....

[d] The drawing scale = .....

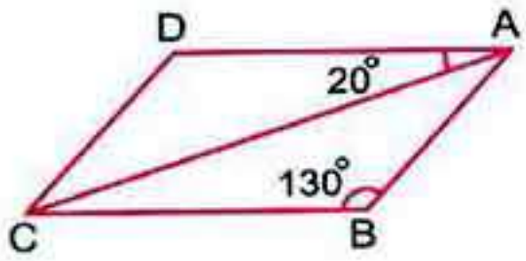
---

**2** ***Choose the correct answer :***

[a] **In the opposite figure :**

ABCD is parallelogram

, then m (∠ BAC) = .....




( 50° **or** 20° **or** 30° **or** 120° )

[b] $\frac{3}{4}$ litre = ..... ( 75 mL. **or** 7.5 $dm^3$ **or** 750 $cm^3$ **or** 0.075 $cm^3$ )

[c] 0.12 = ..... % ( 1.2 **or** 12 **or** 0.12 **or** 120 )

[d] From the quantitative data is the .....

( favorite colour **or** birth place **or** blood type **or** age )

---

**3** [a] A car covers 240 km. in three hours. Find the rate of the speed of the car.

[b] If a man deposited L.E. 20 000 in a bank with an annual interest 8 % Find the total amount he gets at the end of one year.

---

**4** [a] A magnified picture of an insect was taken with a drawing scale 200 : 1 , if its real length is 1.2 mm. find its length in the picture.

[b] A box in the shape of a cuboid with dimensions 30 cm. , 25 cm. and 15 cm. , if it is filled with cuboid shaped pieces of sweets of dimensions 6 cm. , 5 cm. , 3 cm. Find the number of pieces of sweets.

---

**5** [a] The ratio between the lengths of the sides of a triangle is 2 : 3 : 4 , if the perimeter of the triangle is 108 cm.
Find the length of each side of the triangle.

Final Examinations

**[b]** ***The following table shows the marks of 100 pupils in a maths exam :***

| The sets | 10 – | 20 – | 30 – | 40 – | 50 – 60 | Total |
|---|---|---|---|---|---|---|
| The frequency | 15 | 25 | 30 | 20 | 10 | 100 |

Represent the previous data by the frequency curve.

## 5 El-Sharkia Governorate (2016)

***Answer the following questions :***

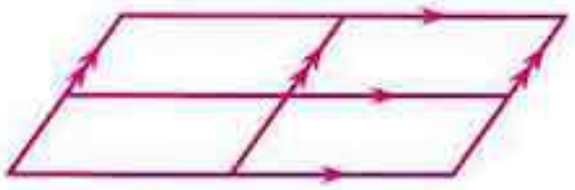
**1** ***Choose the correct answer :***

**[a]** $1 - (35\ \% + 25\ \%) =$ ..... ( $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$ )

**[b]** $2\ m^3 =$ ..... $dm^3$ ( 2 or 20 or 200 or 2 000 )

**[c]** **In the opposite figure :**

The number of parallelograms is .....



( 9 or 7 or 5 or 4 )

**[d]** The opposite data are descriptive except .....

( blood species or the weight or the birth place or the social case )

---

**2** ***Complete the following :***

**[a]** The ratio between 2 kilograms and 1 500 grams in the simplest form is ..... : .....

**[b]** If $\frac{x}{3} = 9\ \%$ , then $x =$ .....

**[c]** In a parallelogram , the sum of the measures of any two consecutive angles = .....

**[d]** If the values of a frequency distribution lie between (20 , 60) , then the range of this distribution = .....

---

**3** **[a]** If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 Find the measure for each angle and mention the type of this triangle according to the measures of its angles.

**[b]** If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. Find its real length in kilometres.

**4** **[a]** A company sells a computer set for L.E. 2 688 , if the percentage of the profit is 12 % Find the company's buying price of a computer set.

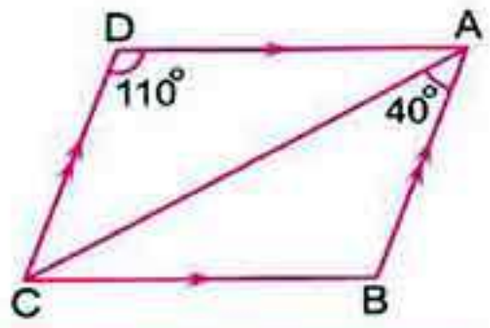
**[b]** ***In the opposite figure :***

ABCD is parallelogram where

m (∠ D) = 110°

, m (∠ BAC) = 40°

Find : m (∠ B) , m (∠ DAC)




**5** **[a]** A case in the shape of a cuboid , its base is a square shaped of side length 6 cm. and its height is 15 cm. Calculate its volume.

**[b]** ***The following table shows the marks of 100 pupils in one month in maths :***

| **Marks** | 20 – | 30 – | 40 – | 50 – | **Sum** |
|---|---|---|---|---|---|
| **Number of pupils** | 15 | 30 | 40 | 15 | **100** |

Draw the frequency curve for this distribution.

# Guide Answers of Final Examinations





## Answers of model examinations of the school book

### Model 1

**1** (1) 2.5 (2) 4 (3) 150 : 1
(4) The base length , the height

**2** (1) 6 (2) 0.75 (3) 6 (4) 45°

**3** [a] The volume of oil = 12 × 1 000
= 12 000 cm$^3$.

The number of bottles = $\frac{12\,000}{400}$
= 30 bottles.

[b]

| C.P. | : | Profit | : | S.P. |
|---|---|---|---|---|
| 100 % | : | 12 % | : | 112 % |
| 72 000 | : | | : | ? |

The selling price = $\frac{72\,000 \times 112\,\%}{100\,\%}$
= L.E. 80 640

**4** [a]

| 1st angle | : | 2nd angle | : | 3rd angle | : | Sum |
|---|---|---|---|---|---|---|
| 2 | : | 3 | : | 4 | : | 9 |
| ? | : | ? | : | ? | : | 180° |

The measure of the first angle
= $\frac{2 \times 180°}{9}$ = 40°
The measure of the second angle
= $\frac{3 \times 180°}{9}$ = 60°
The measure of the third angle
= $\frac{4 \times 180°}{9}$ = 80°

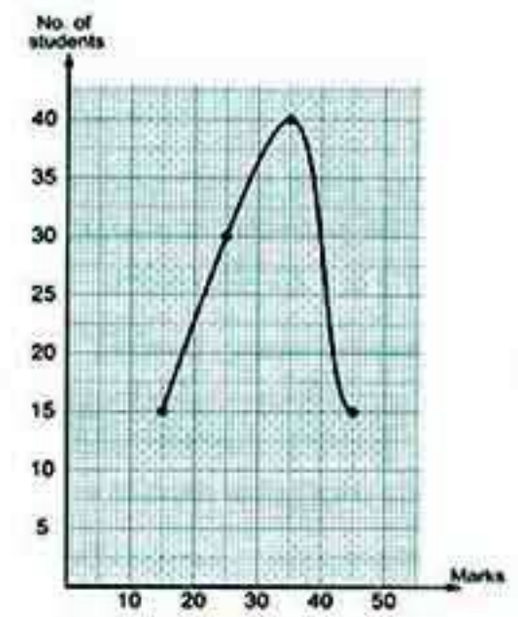
[b] The volume of the cube = 12 × 12 × 12
= 1 728 cm$^3$.
The volume of the an ingot = 3 × 4 × 6
= 72 cm$^3$.
The number of ingots = 1 728 ÷ 72
= 24 ingots.

**5** [a]

| 1st person | : | 2nd person | : | Sum |
|---|---|---|---|---|
| 5 000 | : | 8 000 | : | (÷ 1 000) |
| 5 | : | 8 | : | 13 |
| ? | : | ? | : | 3 900 |

The share of the first person
= $\frac{5 \times 3\,900}{13}$ = 1 500 pounds.
The share of the second person
= $\frac{8 \times 3\,900}{13}$ = 2 400 pounds.

[b]




### Model 2

**1** (1) rectangle (2) $4\frac{4}{5}$ (3) 28 (4) 20

**2** (1) 65 (2) 271 (3) 40 (4) 1 : 120

**3** [a]

| 1st person | : | 2nd person | : | 3rd person | : | Sum |
|---|---|---|---|---|---|---|
| 15 000 | : | 25 000 | : | 20 000 | : | (÷ 1 000) |
| 15 | : | 25 | : | 20 | : | (÷ 5) |
| 3 | : | 5 | : | 4 | : | 12 |
| ? | : | ? | : | ? | : | 5 520 |

The profit share of the first person
= $\frac{3 \times 5\,520}{12}$ = 1 380 pounds.
The profit share of the second person
= $\frac{5 \times 5\,520}{12}$ = 2 300 pounds.
The profit share of the third person
= $\frac{4 \times 5\,520}{12}$ = 1 840 pounds.

[b] The volume of the water = 10 × 1 000
= 10 000 cm$^3$.
The base area of cuboid = 25 × 25
= 625 cm$^2$.
The height of water = $\frac{10\,000}{625}$ = 16 cm.

**4** [a] Boys : Girls : Sum
1 : 2 : 3
? : ? : 360

The number of boys = $\frac{1 \times 360}{3}$
= 120 boys.

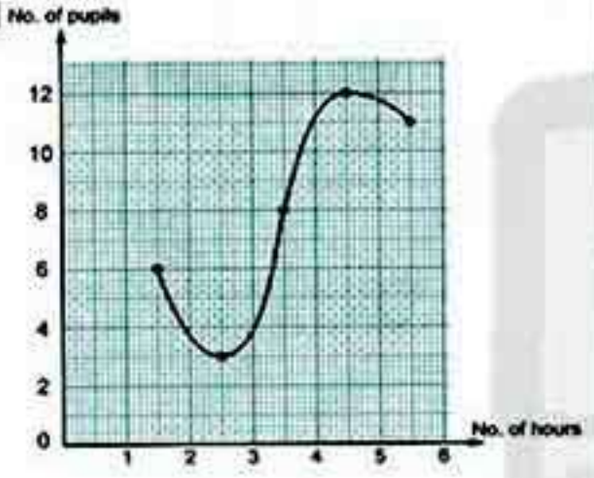
The number of girls = $\frac{2 \times 360}{3}$
= 240 girls.

[b] m (∠ ADC) = 180° – 70° = 110°
∴ The perimeter of triangle BCD
= 7 + 6 + 7.6 = 20.6 cm.

**5** [a] Price before discount : Discount : Price after discount
100 % : 15 % : 85 %
? : ? : 660

The price before discount = $\frac{100\ \% \times 660}{85\ \%}$
≈ 776 pounds.

[b]




## Model examination for the special needs students

**1** (1) 5 : 8 (2) 30 (3) height (4) 3 000

**2** (1) 30 (2) 15 (3) square (4) 1 : 100

**3** (1) 12
(2) minimization
(3) 1 : 4
(4) 90°

**4** (1) (✓) (2) (✗) (3) (✓) (4) (✗)

**5** [a] (1) 2 : 5 (2) 100°
[b] (1) 6 (2) 14







## Answers of Governorates Examinations for the Year 2017

### 1 Cairo (2017)

**1** [a] 6 [b] 40
[c] rectangle , square [d] range

**2** [a] 4 [b] age [c] 1.5 [d] 4

**3** [a] Length in drawing : Length in reality
1 : 500 000
3 : ?

The red distance = $\frac{3 \times 500\ 000}{1}$
= 1 500 000 cm.
= 15 km.

[b] (1) The area of one face = 54 ÷ 6 = 9 $cm^2$.
= (3 × 3) $cm^2$
The edge length = 3 cm.
(2) The volume = 3 × 3 × 3 = 27 $cm^3$.

**4** [a]

| 1st | 2nd | 3rd | Sum |
|---|---|---|---|
| 5 | 4 | 3 | 12 |
| ? | ? | ? | 240 |

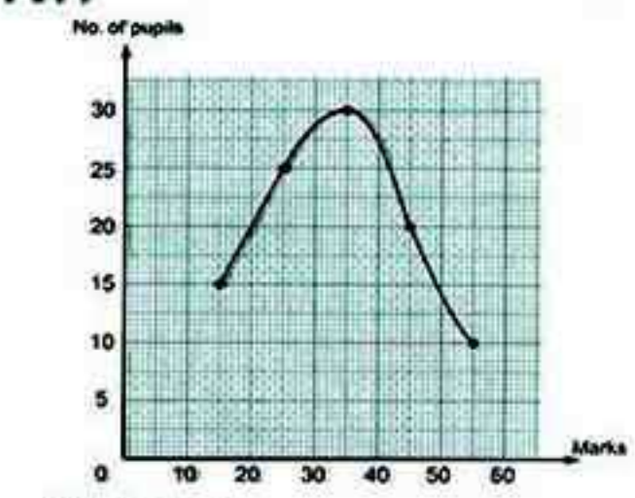
The number of pupils in 1st grade
= $\frac{5 \times 240}{12}$ = 100 pupils
The number of pupils in 2nd grade
= $\frac{4 \times 240}{12}$ = 80 pupils
The number of pupils in 3rd grade
= $\frac{3 \times 240}{12}$ = 60 pupils

[b] Price before discount : Discount : Price after discount
100 % : 15 % : 85 %
? : : 425

The original price = $\frac{100 \times 425}{85}$
= L.E. 500

**5** [a] (1) The length of $\overline{CD}$ = 5 cm.
(2) m (∠ BAC) = 40°

[b] (1)




(2) 60 pupils.

### 2 Giza (2017)

**1** [a] 70 % [b] 6
[c] rectangle , square [d] reduction

**2** [a] 2 : 9 [b] 27
[c] 6 [d] favorite colour

**3** [a] Length in drawing : Length in reality
1 : 1 100 000
15 : ?

The real length = $\frac{15 \times 1\ 100\ 000}{1}$
= 16 500 000 cm.
= 165 km.

[b] The rate = $\frac{20}{5}$ = 4 litres/hr.
Advise by yourself.

**4** [a] The capacity = 40 × 30 × 1.8 = 2 160 $m^3$.
= 2 160 000 litres

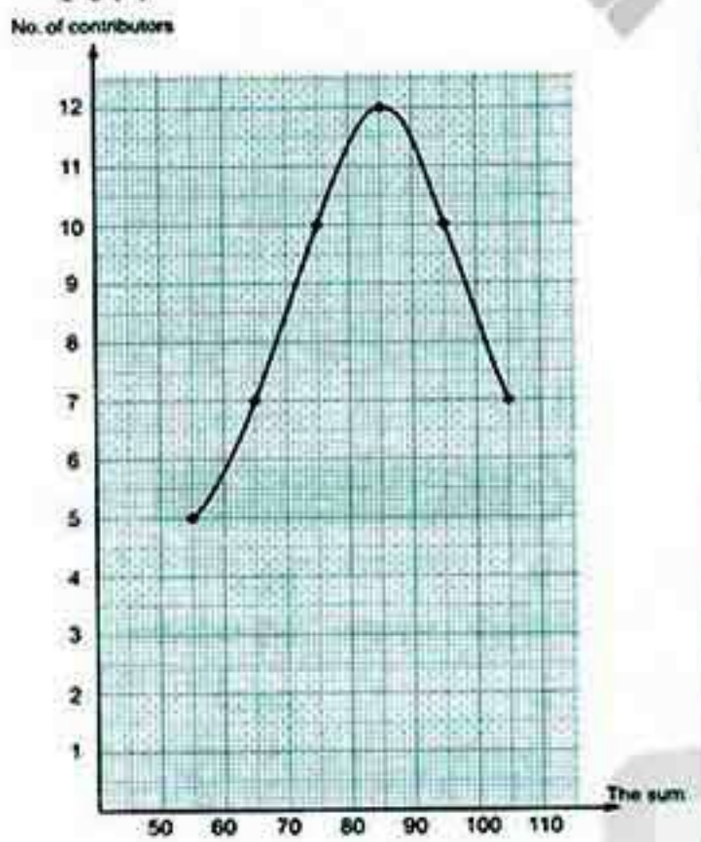
[b] Girls : Boys : Sum
3 : 5 : 8
? : ? : 560

The number of girls = $\frac{3 \times 560}{8}$
= 210 girls
The number of boys = $\frac{5 \times 560}{8}$
= 350 boys

**5** [a] (1) m (∠ D) = 130°

(2) m (∠ BAC) = 25°

[b] (1)




(2) 29 contributors.

## 3 Alexandria (2017)

**1** [a] 0.125 [b] 6

[c] 4.2 [d] favorite food

**2** [a] 8 [b] 5 : 7 [c] 40 [d] square

**3** [a]

| Boys | : | Girls | : | Sum |
|---|---|---|---|---|
| 4 | : | 5 | : | 9 |
| 16 | : | | : | ? |

The number of pupils = $\frac{16 \times 9}{4}$

= 36 pupils

[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 40 |
| ? | : | 160 |

The length in the picture = $\frac{1 \times 160}{40}$ = 4 cm.

**4** [a]

| Buying price | : | Profit | : | Selling price |
|---|---|---|---|---|
| 100 % | : | 15 % | : | 115 % |
| ? | : | ? | : | 21 520 |

The buying price = $\frac{100 \times 21\,520}{115}$

= L.E. 18 713 $\frac{1}{23}$

≈ L.E. 18 713

The profit = $\frac{15 \times 21\,520}{115}$ = L.E. 2 806 $\frac{22}{23}$

≈ L.E. 2 807

[b] The volume of cube = 12 × 12 × 12

= 1 728 cm$^3$.

The volume of an alloy = 3 × 4 × 6

= 72 cm$^3$.

The number of alloys = $\frac{1\,728}{72}$ = 24 alloys

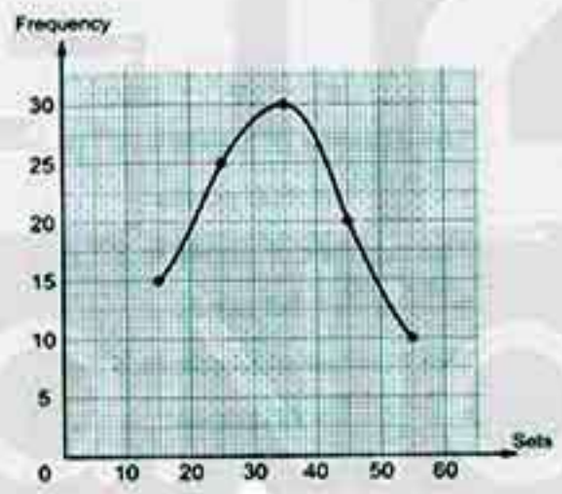
**5** [a] (1) The capacity = 30 × 30 × 30

= 27 000 cm$^3$.

= 27 litres

(2) The price = 27 × 9.5 = 256.5 pounds

[b]




## 4 El-Kalyoubia (2017)

**1** [a] 4 : 7 : 9 [b] 6

[c] 18 : 1 [d] diameter length × π

**2** [a] 4 [b] 729

[c] 500 [d] 1 : 200





**3** [a]

| Building | : | Tower |
|---|---|---|
| 4 | : | 20 |
| 36 | : | ? |

The height of the tower = $\frac{20 \times 36}{4}$ = 180 m.

[b] (1)

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 500 |
| 2 | : | ? |

The first dimension in reality

= $\frac{2 \times 500}{1}$ = 1 000 cm. = 10 m.

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 500 |
| 4 | : | ? |

The second dimension in reality

= $\frac{4 \times 500}{1}$ = 2 000 cm. = 20 m.

(2) The real area of playground = 10 × 20

= 200 m$^2$.

**4** [a] (1) DE , 4 (2) 3 (3) 12

[b] The capacity = 40 × 30 × 1.8 = 2 160 m$^3$.

= 2 160 000 litres

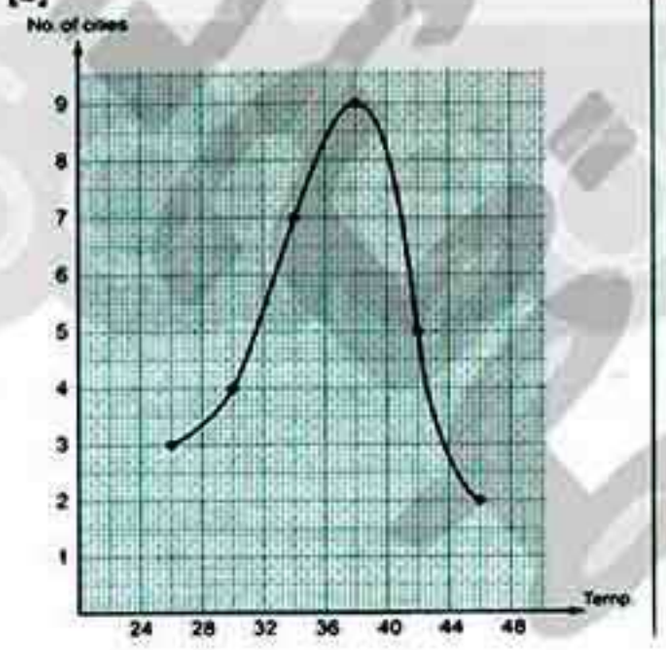
**5** [a]

| A | : | C | : | Sum |
|---|---|---|---|---|
| 2 | : | 3 | : | 5 |
| ? | : | ? | : | 90 |

The measure of ∠ A = $\frac{2 \times 90}{5}$ = 36°

The measure of ∠ C = $\frac{3 \times 90}{5}$ = 54°

[b]




## 5 El-Sharkia (2017)

**1** [a] 2 [b] 28 [c] age [d] 2

**2** [a] 9 [b] 1 : 3 [c] 48 [d] 10

**3** [a] The share of the first son

= $\frac{1}{3}$ × 6 300 = 2 100 pounds.

The rest = 6 300 – 2 100 = 4 200 pounds.

| 2nd son | : | 3rd son | : | Sum |
|---|---|---|---|---|
| 3 | : | 2 | : | 5 |
| ? | : | ? | : | 4 200 |

The share of second son = $\frac{3 \times 4\,200}{5}$

= 2 520 pounds.

The share of third son = $\frac{2 \times 4\,200}{5}$

= 1 680 pounds.

[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 9 000 000 |
| ? | : | 180 km. |

The distance on the map

= $\frac{1 \times 180 \times 100\,000}{9\,000\,000}$ = 2 cm.

**4** [a]

| Price before discount | : | Discount | : | Price after discount |
|---|---|---|---|---|
| 100 % | : | 10 % | : | 90 % |
| ? | : | | : | 4 500 |

The price before discount = $\frac{100 \times 4\,500}{90}$

= L.E. 5 000

[b] m (∠ ADC) = 110°

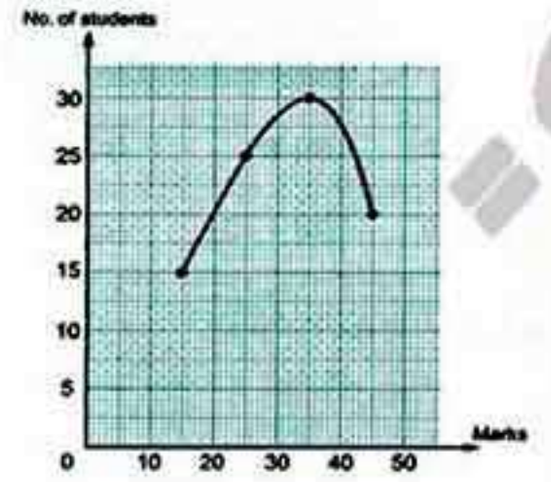
The perimeter Δ BCD = 8 + 6 + 4.1 + 4.1

= 22.2 cm.

**5** [a] The edge length = 132 ÷ 12 = 11 cm.

The volume = 11 × 11 × 11 = 1 331 cm$^3$.

[b]




## 6 El-Monofia (2017)

**1** [a] 2.8 [b] 75
[c] 20 – X [d] the age

**2** [a] 80 [b] 40
[c] equilateral [d] 60°

**3** [a]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 1 000 |
| ? | : | 50 |

The side length in drawing
$= \frac{1 \times 50 \times 100}{1\,000} = 5$ cm.
The area in drawing $= 5 \times 5 = 25$ cm$^2$.

[b] The cost = 49 000 + 1 000 = L.E. 50 000
The profit = 55 000 – 50 000 = L.E. 5 000
The percentage of profit $= \frac{5\,000}{50\,000} \times 100\ \%$
$= 10\ \%$

**4** [a] The edge length = 36 ÷ 12 = 3 cm.
The volume = $3 \times 3 \times 3 = 27$ cm$^3$.

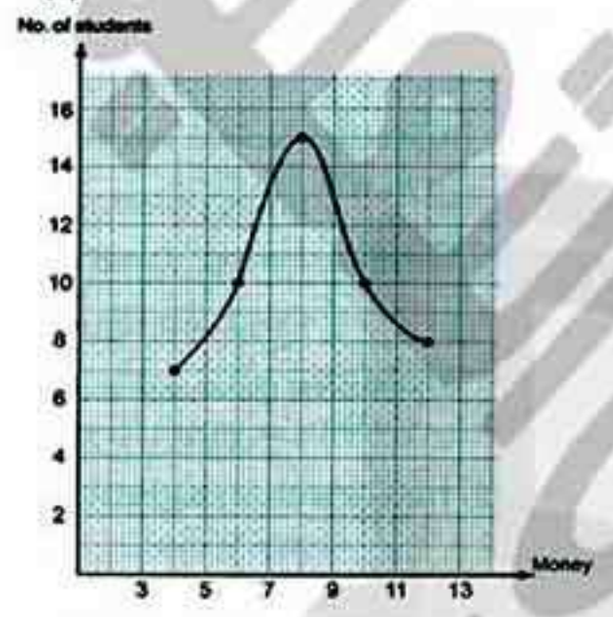
[b]

| Ahmed | : | Mohamed | : | Difference |
|---|---|---|---|---|
| 7 | : | 4 | : | 3 |
| ? | : | ? | : | 60 |

Ahmed's money $= \frac{7 \times 60}{3} =$ L.E. 140
Mohamed's money $= \frac{4 \times 60}{3} =$ L.E. 80

**5** [a] The side length of the base = 20 ÷ 4 = 5 cm.
The volume = $5 \times 5 \times 7 = 175$ cm$^3$.

[b] (1) 18 students.
(2)




## 7 El-Gharbia (2017)

**1** [a] $\frac{9}{5}$ [b] 27 [c] square [d] 8

**2** [a] 70 [b] 10
[c] 1 000 [d] blood type

**3** [a]

| Ahmed | : | Omar | : | Sum |
|---|---|---|---|---|
| 9 | : | 13 | : | 22 |
| ? | : | ? | : | 440 |

The money with Ahmed $= \frac{9 \times 440}{22}$
$= 180$ pounds.
The money with Omar $= \frac{13 \times 440}{22}$
$= 260$ pounds.

[b] The height of water $= \frac{10 \times 1\,000}{25 \times 25} = 16$ cm.

**4** [a]

| Price before discount | : | Discount | : | Price after discount |
|---|---|---|---|---|
| 100 % | : | 10 % | : | 90 % |
| ? | : | | : | 1 800 |

The original price $= \frac{100 \times 1\,800}{90}$
$= 2\,000$ pounds.





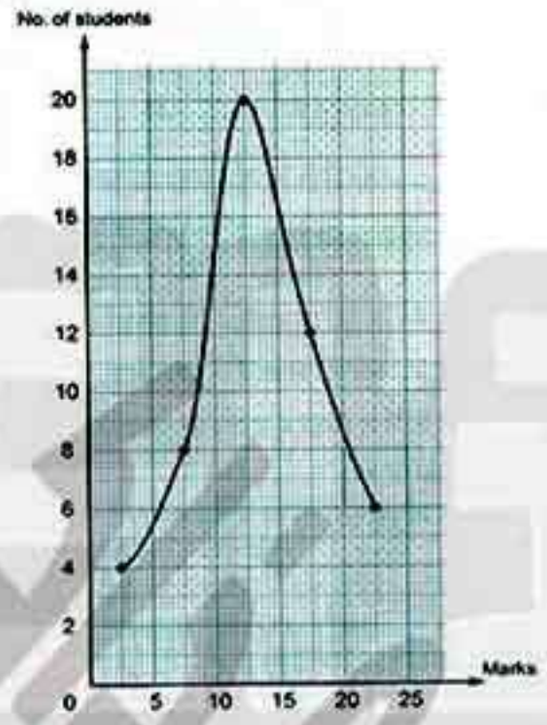
[b] (1) m (∠ ABD) = 70°
(2) m (∠ ADC) = 115°
(3) The perimeter of Δ ABD
= 6 + 8 + 3.5 + 3.5 = 21 cm.

**5** [a]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 1 100 000 |
| 15 | : | ? |

The real length $= \frac{15 \times 1\,100\,000}{1}$
$= 16\,500\,000$ cm.
$= 165$ km.

[b] (1)




(2) 12 students.

## 8 El-Dakahlia (2017)

**1** [a] The volume of the inner space of a hollow solid
[b] 50 [c] 1 : 1 [d] 6

**2** [a] age [b] 1000 cm$^3$.
[c] 2 [d] 3

**3** [a]

| Length | : | Width | : | Perimeter |
|---|---|---|---|---|
| 7 | : | 4 | : | 22 |
| ? | : | ? | : | 44 |

The length $= \frac{7 \times 44}{22} = 14$ cm.
The width $= \frac{4 \times 44}{22} = 8$ cm.
The area $= 14 \times 8 = 112$ cm$^2$.

[b] The depth of the water $= \frac{12 \times 1\,000}{20 \times 15}$
$= 40$ cm.

**4** [a]

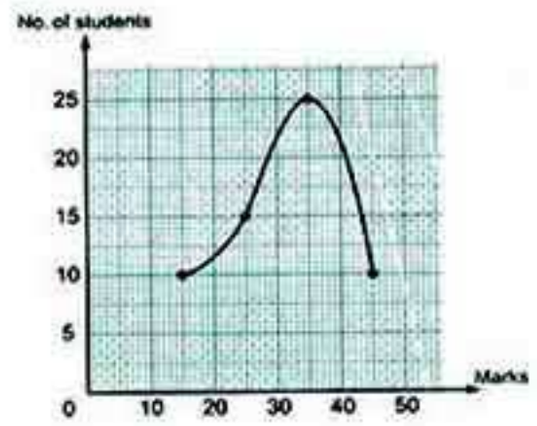
| Height | 45 | ? |
|---|---|---|
| Shadow length | 24 | 8 |

The height of the tree $= \frac{45 \times 8}{24} = 15$ m.

[b] (1) m (∠ D) = 100°
(2) m (∠ ACD) = 45°
(3) The perimeter of parallelogram
= 6 + 5 + 6 + 5 = 22 cm.

**5** [a] The percentage of the remainder
= 100 % – 25 % = 75 %
$\frac{60}{\text{number of notebooks}} = \frac{75}{100}$
The number of notebooks $= \frac{100 \times 60}{75}$
= 80 notebooks

[b] (1) $x = 30$
(2)




## 9 Ismailia (2017)

**1** [a] equal in length [b] 1 : 600
[c] 15 [d] diameter length

**2** [a] 3 [b] 6 [c] 36 cm$^3$. [d] 18

**3** [a] The rate = $\frac{45}{5}$ = 9 L.E./day

[b] Buying price : profit : Selling price
100 % : 6 % : 106 %
? : : 3 180

The buying price = $\frac{3\,180 \times 100}{106}$

= 3 000 pounds.

**4** [a] The edge length = 40 ÷ 4 = 10 cm.

The volume = 10 × 10 × 10 = 1 000 cm$^3$.

[b]

| 1st | : | 2nd | : | 3rd | : | Sum |
|---|---|---|---|---|---|---|
| 50 000 | : | 40 000 | : | 30 000 | : | (÷ 10 000) |
| 5 | : | 4 | : | 3 | : | 12 |
| ? | : | ? | : | ? | : | 36 000 |

The share of 1st person = $\frac{5 \times 36\,000}{12}$

= 15 000 pounds

The share of 2nd person = $\frac{4 \times 36\,000}{12}$

= 12 000 pounds

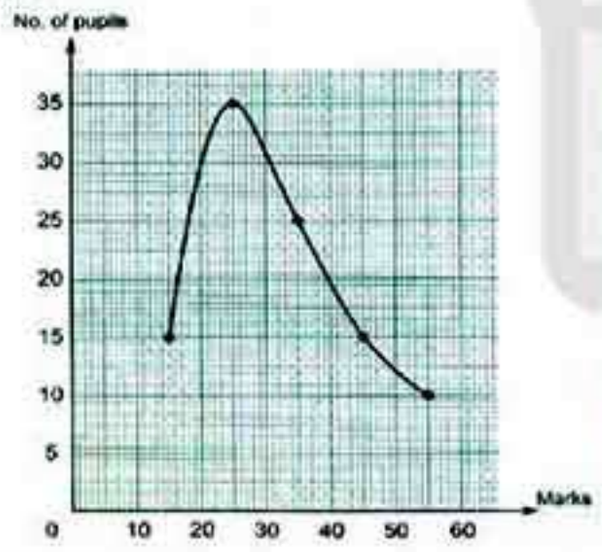
The share of 3rd person = $\frac{3 \times 36\,000}{12}$

= 9 000 pounds

**5** [a] (1) m (∠ CAB) = 40°

(2) m (∠ B) = 110°

[b] (1)




(2) 50 pupils.

## 10 Suez (2017)

**1** [a] 2 : 3 [b] 6

[c] 4 000 [d] rectangle , square

**2** [a] 0.1 [b] L.E. 63 000

[c] 30 cm.$^3$ [d] 6

**3** [a] The rate = $\frac{6}{3}$ = 2 feddans/hr.

[b]

| 1st | : | 2nd | : | 3rd | : | Sum |
|---|---|---|---|---|---|---|
| 3 | : | 4 | : | | | |
| | : | 2 | : | 3 | | |
| 6 | : | 8 | : | 12 | : | (÷ 2) |
| 3 | : | 4 | : | 6 | : | 13 |
| ? | : | ? | : | ? | : | 6 240 |

The share of the 1st person = $\frac{3 \times 6\,240}{13}$

= L.E. 1 440

The share of the 2nd person = $\frac{4 \times 6\,240}{13}$

= L.E. 1 920

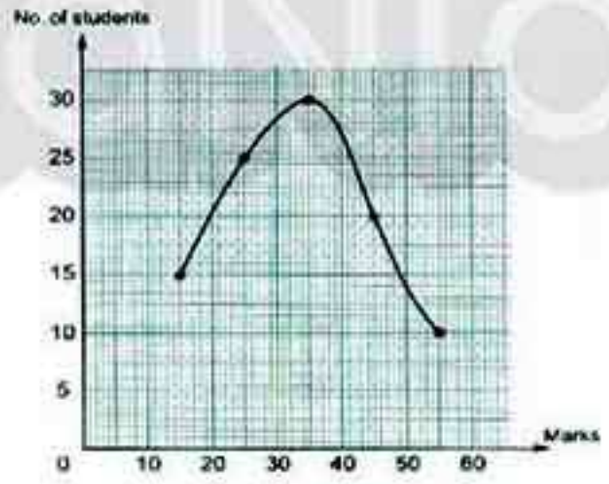
The share of the 3rd person = $\frac{6 \times 6\,240}{13}$

= L.E. 2 880

**4** [a] The edge length = 36 ÷ 12 = 3 cm.

The volume = 3 × 3 × 3 = 27 cm$^3$.

[b]








**5** [a] Length in drawing : Length in reality
1 : 900 000
? : 180

The distance on the map
= $\frac{1 \times 180 \times 100\,000}{900\,000}$ = 20 cm.

[b] (1) m (∠ ABC) = 110°

(2) AC = 12 cm.

(3) The perimeter of Δ ABC
= 6.5 + 8 + 12 = 26.5 cm.

## 11 Port Said (2017)

**1** [a] 0.1 [b] the range [c] edge [d] 1 : 2

**2** [a] ∉ [b] 6.7

[c] the favorite colour [d] 90

**3** [a] The rate = $\frac{450}{5}$ = 90 L.E./day

[b] The volume of cube = 18 × 18 × 18
= 5 832 cm$^3$.

The volume of one ingot = 3 × 6 × 9
= 162 cm$^3$.

The number of ingots = $\frac{5\,832}{162}$ = 36 ingots

**4** [a] Buying price : Profit : Selling price
100 % : 15 % : 115 %
? : : 17 250

The buying price = $\frac{100 \times 17\,250}{115}$

= L.E. 15 000

[b] BC = 4 cm. , m (∠ D) = 115°
, m (∠ ACD) = 40°

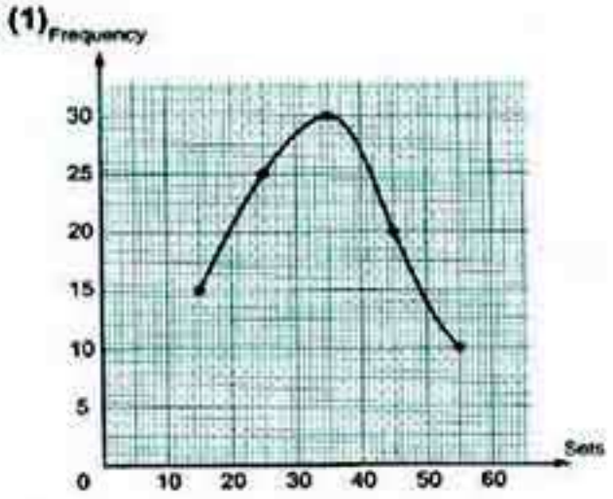
**5** [a] Length in drawing : Length in reality
1 : 1 000 000
9 : ?

The real distance = $\frac{9 \times 1\,000\,000}{1}$

= 9 000 000 cm.

= 90 km.

[b] (1)




(2) 40 students.

## 12 Dameitta (2017)

**1** [a] range [b] rectangle , square

[c] 12 [d] 27

**2** [a] 6.5 [b] 1 : 1 000

[c] 1 : 6 [d] 4

**3** [a]

| 1st building | : | 2nd building | : | Difference |
|---|---|---|---|---|
| 4 | : | 7 | : | 3 |
| ? | : | ? | : | 9 |

The height of 1st building = $\frac{4 \times 9}{3}$ = 12 m.

The height of 2nd building = $\frac{7 \times 9}{3}$ = 21 m.

[b] The volume of water = $\frac{1}{3} \times 7 \times 5 \times 9$

= 105 m$^3$.

**4** [a]

| 1st | : | 2nd | : | 3rd | : | Sum |
|---|---|---|---|---|---|---|
| 3 | : | 4 | | | | |
| | : | 2 | : | 3 | | |
| 6 | : | 8 | : | 12 | : | (÷ 2) |
| 3 | : | 4 | : | 6 | : | 13 |
| ? | : | ? | : | ? | : | 6 240 |

The share of 1st person = $\frac{3 \times 6\,240}{13}$

= L.E. 1 440

The share of 2nd person = $\frac{4 \times 6\,240}{13}$

= L.E. 1 920

The share of 3rd person = $\frac{6 \times 6\,240}{13}$

= L.E. 2 880

[b] Price before discount : Discount : Price after discount
100 % : 15 % : 85 %
? : : 221

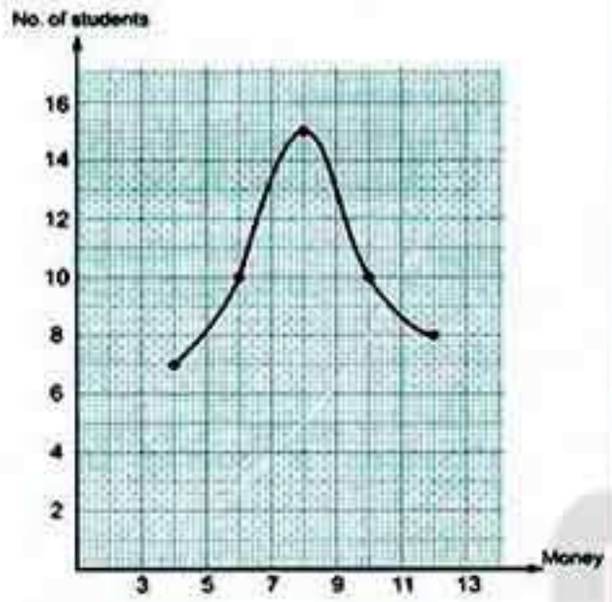
The original price = $\frac{100 \times 221}{85}$ = L.E. 260

---

**5** [a] (1) m (∠ ABD) = 80°

(2) The perimeter fo Δ ACD
= 8 + 5.5 + 6 + 6 = 25.5 cm.

[b] (1)




(2) 18 students.

## 13 Kafr El-Sheikh (2017)

**1** [a] $\frac{1}{2}$ × The base length × The height
[b] 729 [c] 9 : 8 [d] 3

---

**2** [a] 6 [b] 20 : 1 [c] 4 600 [d] age

---

**3** [a] Width : Length : Perimeter
3 : 4 : 14
? : ? : 140

The width = $\frac{3 \times 140}{14}$ = 30 cm.

The length = $\frac{4 \times 140}{4}$ = 40 cm.

The area = 30 × 40 = 1 200 $cm^2$.

[b] C.P. : Profit : S.P.
100 % : 15 % : 115 %
? : ? : 21 275

The cost price = $\frac{100 \times 21\,275}{115}$
= 18 500 pounds.

The profit = $\frac{15 \times 21\,275}{115}$ = 2 775 pounds.

---

**4** [a] 1st brother : 2nd brother : Difference
7 : 5 : 2
? : ? : 80

The share of 1st brother = $\frac{7 \times 80}{2}$ = 280 $m^2$.

The share of 2nd brother = $\frac{5 \times 80}{2}$ = 200 $m^2$.

The area of the land = 280 + 200 = 480 $m^2$.

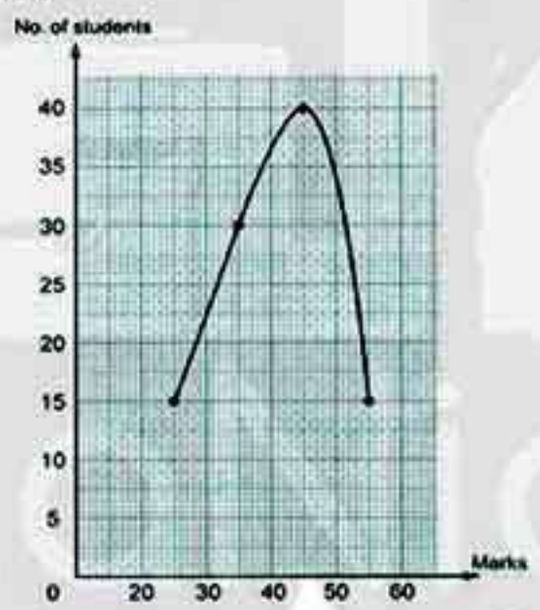
[b] (1) m (∠ ADC) = 110°

(2) The perimeter of Δ BCD
= 7 + 6 + 3.8 + 3.8 = 20.6 cm.

---

**5** [a] The height of water = $\frac{405}{30 \times 15}$ = 0.9 m.
= 90 cm.

[b] (1)




(2) (55 , 15)

## 14 El-Beheira (2017)

**1** [a] The volume [b] 30°
[c] Square and rhombus [d] the age

---

**2** [a] 5 [b] 3 000 [c] 35 [d] 28





**3** [a] The rate of 1st machine = $\frac{500}{2}$ = 250 m/hr.

The rate of 2nd machine $\frac{600}{2\frac{1}{2}}$ = 240 m/hr.

The 1st machine is more efficient.

[b] Length in drawing : Length in reality
1 : 100 000
? : 36 km.

The drawing distance between them
in this atlas = $\frac{1 \times 36 \times 100\,000}{100\,000}$ = 36 cm.

---

**4** [a] The rest = 17 – 5 = 12 kirats
Son : Daughter : Sum
2 : 1 : 3
? : ? : 12

The share of the son = $\frac{2 \times 12}{3}$ = 8 kirats

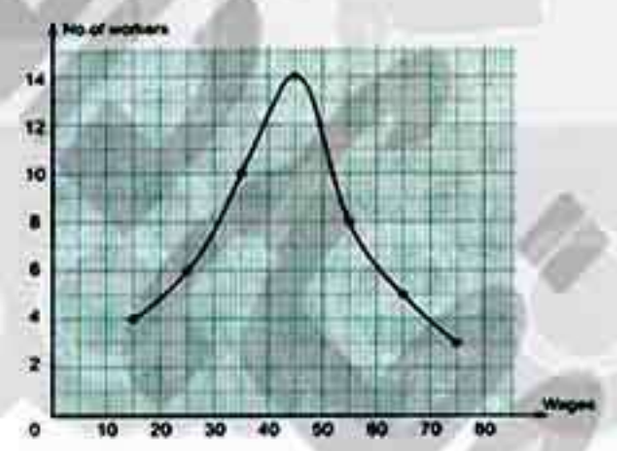
The share of the daughter = $\frac{1 \times 12}{3}$
= 4 kirats

[b] The capacity = 40 × 30 × 1.8
= 2 160 $m^3$ = 2 160 000 L.

---

**5** [a] The volume of metallic piece
= 30 × 30 × 5 = 4 500 $cm^3$.

[b] (1)




(2) 40 %

## 15 El-Fayoum (2017)

**1** [a] 3 : 2 [b] 180 [c] 8 [d] 40

---

**2** [a] 27 [b] {5}
[c] the birth place [d] 8

---

**3** [a] Length in drawing : Length in reality
1 : 200 000
8 :

The real distance = $\frac{8 \times 200\,000}{1}$
= 1 600 000 cm.
= 16 km.

[b] Buying price : Profit : selling price
100% : 5% : 105%
60 000 : : ?

The selling price = $\frac{105 \times 60\,000}{100}$
= L.E. 63 000

---

**4** [a] Hany : Sherif : Khalid
3 : 5 : 7
24 : ? : ?

The share of Sherif = $\frac{5 \times 24}{3}$ = L.E. 40

The share of Khalid = $\frac{7 \times 24}{3}$ = L.E. 56

[b] The volume of cube = 12 × 12 × 12
= 1 728 $cm^3$.

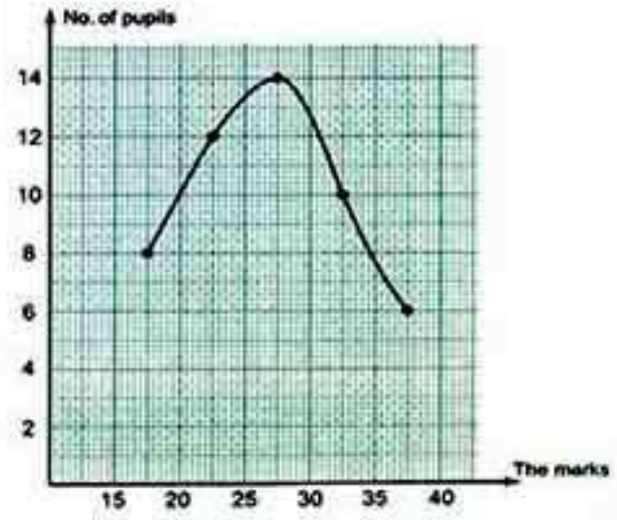
The volume of one alloy = 3 × 4 × 6
= 72 $cm^3$.

The number of alloys = $\frac{1\,728}{72}$ = 24 alloys

---

**5** [a] m (∠ B) = 110° , m (∠ DAC) = 30°

[b]



## 16 Beni Suef (2017)

**1** [a] length ، width [b] 9
[c] 4 ، 20 [d] 60

**2** [a] 180° [b] 1 : 4
[c] 10 [d] the age

**3** [a] The rate = $\frac{1\,000}{4}$ = 250 cans/hr.

[b]

| Before interest | : | Interest | : | After interest |
|---|---|---|---|---|
| 100 % | : | 10 % | : | 110 % |
| 9 000 | : | | : | ? |

The amount of money = $\frac{110 \times 9\,000}{100}$
= L.E. 9 900

**4** [a] The edge length = 36 ÷ 12 = 3 cm.
The volume = 3 × 3 × 3 = 27 $cm^3$.

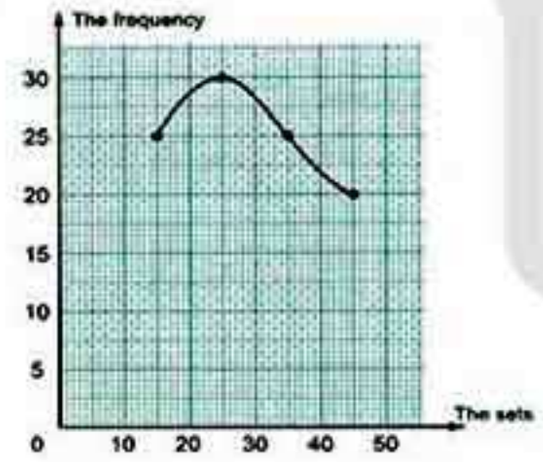
[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 200 000 |
| ? | : | 48 km. |

The distance in the atlas
= $\frac{1 \times 48 \times 100\,000}{200\,000}$ = 24 cm.

**5** [a] (1) m (∠ C) = 60°
(2) The perimeter of parallelogram ABCD
= 5 + 3 + 5 + 3 = 16 cm.

[b]




## 17 El-Menia (2017)

**1** [a] 1 : 3 [b] 8 [c] 30 [d] The age

**2** [a] rhombus ، square [b] 30
[c] 8 [d] 62.84

**3** [a]

| Width | : | Length | : | Perimeter |
|---|---|---|---|---|
| 3 | : | 4 | : | 14 |
| ? | : | ? | : | 70 |

The width = $\frac{3 \times 70}{14}$ = 15 cm.
The length = $\frac{4 \times 70}{14}$ = 20 cm.
The area = 15 × 20 = 300 $cm^2$.

[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 40 |
| ? | : | 160 |

The heigth in the picture = $\frac{1 \times 160}{40}$ = 4 cm.

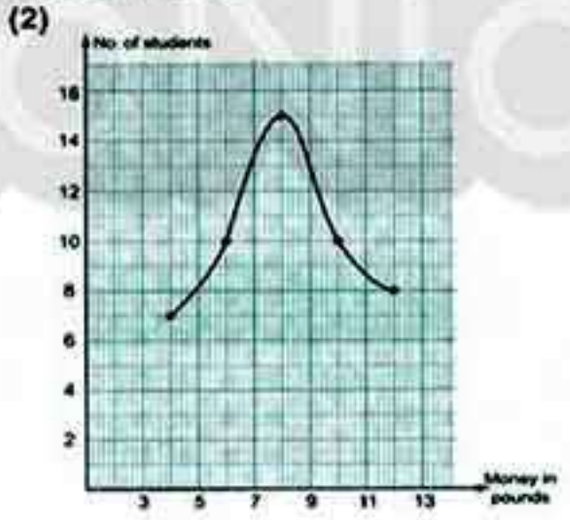
**4** [a]

| C.P. | : | Profit | : | S.P. |
|---|---|---|---|---|
| 100 % | : | 12 % | : | 112 % |
| 60 000 | : | | : | ? |

The selling price = $\frac{112 \times 60\,000}{100}$
= 67 200 pounds.

[b] The volume of big cube = 15 × 15 × 15
= 3 375 $cm^3$.
The volume of small cube = 3 × 3 × 3
= 27 $cm^3$.
The number of small cubes
= $\frac{3\,375}{27}$ = 125 cubes.

**5** [a] The volume of juice = 6 × 6 × 15 = 540 $cm^3$.
[b] (1) 33 students.
(2)








## 18 Assiut (2017)

**1** [a] 28 [b] 6 [c] age [d] 3 : 8

**2** [a] 2 [b] square [c] 4 [d] 6

**3** [a]

| 1st piece | : | 2nd piece | : | Sum |
|---|---|---|---|---|
| 5 | : | 9 | : | 14 |
| ? | : | ? | : | 126 |

The length of 1st piece = $\frac{5 \times 126}{14}$ = 45 m.
The length of 2nd piece = $\frac{9 \times 126}{14}$ = 81 m.

[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 100 |
| ? | : | 18 m. |

The length in the picture = $\frac{1 \times 18 \times 100}{100}$
= 18 cm.

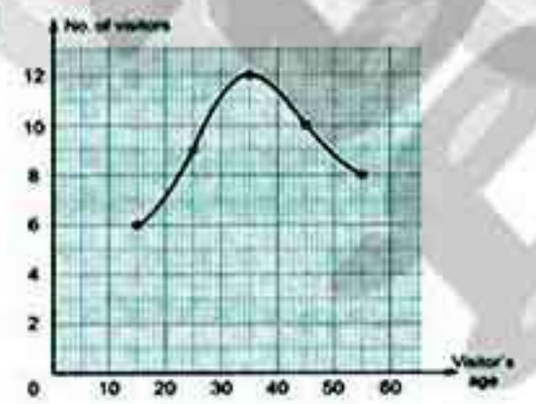
**4** [a] (1) The height of water = $\frac{405}{30 \times 15}$ = 0.9 m.
(2) The height of the empty part
= 2 – 0.9 = 1.1 m.
The volume of needed water
= 30 × 15 × 1.1 = 495 $m^3$.
[b] (1) m (∠ ADC) = 130°
(2) The perimeter of Δ BCD
= 8 + 5 + 6 = 19 cm.

**5** [a]

| 1st brother | : | 2nd brother | : | Difference |
|---|---|---|---|---|
| 7 | : | 5 | : | 2 |
| ? | : | ? | : | 80 |

The share of 1st brother = $\frac{7 \times 80}{2}$ = 280 $m^2$.
The share of 2nd brother = $\frac{5 \times 80}{2}$ = 200 $m^2$.
The area of the land = 280 + 200 = 480 $m^2$.

[b]




## 19 Souhag (2017)

**1** [a] rectangle ، square [b] 1 : 3
[c] 6 [d] 40

**2** [a] 2 π r [b] The age [c] $\frac{1}{4}$ [d] 9

**3** [a]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 500 000 |
| 3 | : | ? |

The real distance = $\frac{3 \times 500\,000}{1}$
= 1 500 000 cm.
= 15 km.

[b]

| Hany | : | Samy | : | Khaled | : | Sum |
|---|---|---|---|---|---|---|
| 30 000 | : | 40 000 | : | 50 000 | : | (÷ 10 000) |
| 3 | : | 4 | : | 5 | : | 12 |
| ? | : | ? | : | ? | : | 6 000 |

The share of Hany = $\frac{3 \times 6\,000}{12}$
= 1 500 pounds.
The share of Samy = $\frac{4 \times 6\,000}{12}$
= 2 000 pounds.
The share of Khaled = $\frac{5 \times 6\,000}{12}$
= 2 500 pounds.

**4** [a] The volume of cube = 9 × 9 × 9 = 729 $cm^3$.
The volume one alloy = 3 × 3 × 1 = 9 $cm^3$.
The number of alloys = $\frac{729}{9}$ = 81 alloys.

[b]

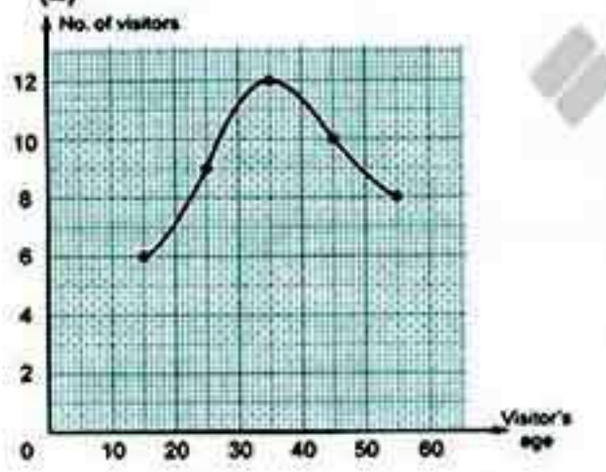
| Buying price | : | Profit | : | Selling price |
|---|---|---|---|---|
| 100 % | : | 15 % | : | 115 % |
| ? | : | | : | 23 000 |

The buying price = $\frac{100 \times 23\,000}{115}$
= 20 000 pounds.

**5** [a] (1) m (∠ ADC) = 110°
(2) The perimeter of Δ BCD
= 7 + 6 + 3.8 + 3.8 = 20.6 cm.

[b] (1) 27 visitors.

(2)




## 20 Qena (2017)

**1** [a] blood species [b] square
[c] 40 [d] 4 600

**2** [a] 6 [b] 1 : 4 [c] 45 [d] 700 $cm^3$

**3** [a] The rate of 1st tractor = $\frac{6}{3}$ = 2 feddans/hr.

The rate of 2nd tractor = $\frac{10}{4}$

= 2.5 feddans/hr.

The 2nd tractor is more efficiency.

[b] (1) The capacity of the cube = 30 × 30 × 30

= 27 000 $cm^3$ = 27 litres

(2) The price of oil = 27 × 10

= 270 pounds.

**4** [a]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 1 000 |
| 3 | : | ? |

The real length = $\frac{3 \times 1\,000}{1}$ = 3 000 cm.

= 30 m.

[b] The volume of cube = 12 × 12 × 12

= 1 728 $cm^3$

The volume of one ingot = 3 × 4 × 6

= 72 $cm^3$

The number of ingots = $\frac{1\,728}{72}$ = 24 ingots

**5** [a]

| 1st brother | : | 2nd brother | : | Difference |
|---|---|---|---|---|
| 7 | : | 5 | : | 2 |
| ? | : | ? | : | 80 |

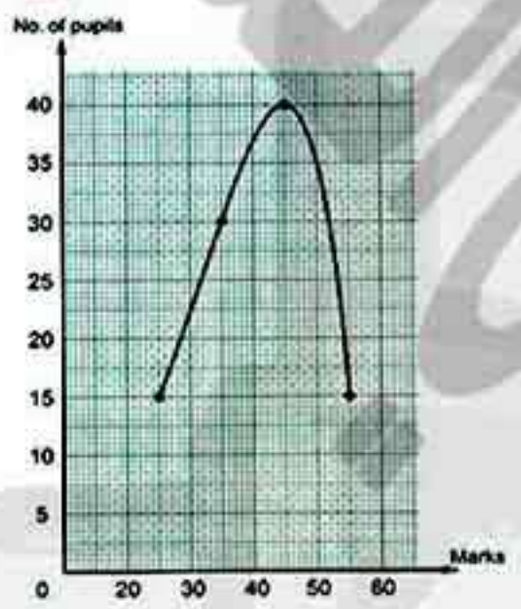
The share of 1st brother = $\frac{7 \times 80}{2}$ = 280 $m^2$

The share of 2nd brother $\frac{5 \times 80}{2}$ = 200 $m^2$

The area of the land = 280 + 200 = 480 $m^2$

[b] (1) 45 pupils.

(2)




## 21 Luxor (2017)

**1** [a] 6 [b] 180° [c] 4 [d] 25 $cm^2$

**2** [a] 2 : 3 [b] the blood type [c] 3 000
[d] rhombus , square

**3** [a]

| Buying price | : | Loss | : | Selling price |
|---|---|---|---|---|
| 100 % | : | 5 % | : | 95 % |
| 150 000 | : | | : | ? |

The selling price = $\frac{95 \times 150\,000}{100}$

= L.E. 142 500

[b]

| Length in drawing | : | Length in reality |
|---|---|---|
| 1 | : | 1 000 |
| 3 | : | ? |

The real height = $\frac{3 \times 1\,000}{1}$ = 3 000 cm.

= 30 m.





**4** [a]

| 1st road | : | 2nd road | : | Difference |
|---|---|---|---|---|
| 2 | : | 5 | : | 3 |
| ? | : | ? | : | 21 |

The length of 1st road = $\frac{2 \times 21}{3}$ = 14 km.

The length of 2nd road = $\frac{5 \times 21}{3}$ = 35 km.

[b] The volume of honey = 20 × 20 × 20

= 8 000 $cm^3$

= 8 litres.

The price of honey = 8 × 8 = 64 pounds.

**5** [a] The volume of cartoon box

= 50 × 40 × 30 = 60 000 $cm^3$

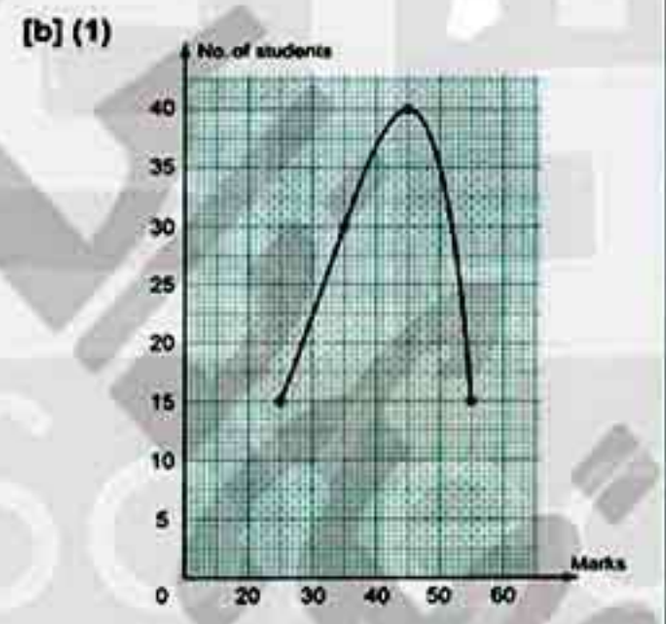
The volume of a tea box = 10 × 5 × 6

= 300 $cm^3$

The number of tea boxes = $\frac{60\,000}{300}$

= 200 boxes.

[b] (1)




(2) 45 students.

## 22 Aswan (2017)

**1** [a] 0.5 [b] 1 : 5 [c] square
[d] the favourite colour

**2** [a] 5 [b] 48.68 [c] 40 [d] 0.27

**3** [a] The profit = 2 640 – 2 400 = L.E. 240

The percentage of profit

= $\frac{240}{2\,400}$ × 100 % = 10 %

[b] The drawing scale = $\frac{10}{120 \times 100\,000}$

= 1 : 1 200 000

**4** [a] The volume = 6 × 6 × 10 = 360 $cm^3$

[b] m (∠ D) = 118° , m (∠ DAC) = 27°

**5** [a]

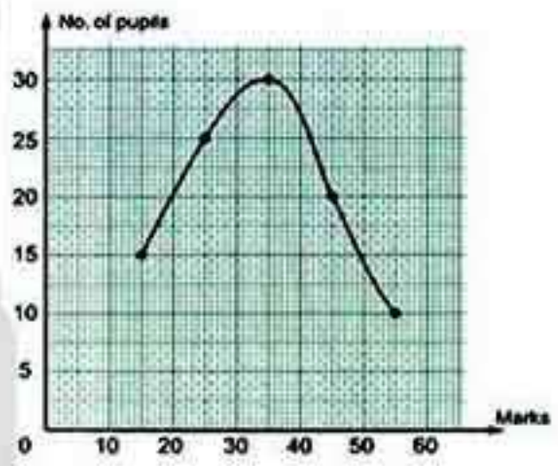
| 1st angle | : | 2nd angle | : | 3rd angle |
|---|---|---|---|---|
| 5 | : | 6 | : | 7 |
| 50° | : | ? | : | ? |

The measure of 2nd angle = $\frac{6 \times 50°}{5}$ = 60°

The measure of 3rd angle = $\frac{7 \times 50°}{5}$ = 70°

[b] (1) 60 pupils.

(2)




## 23 South Sinai (2017)

**1** [a] 3 : 8 [b] rectangle , square
[c] the range [d] 2

**2** [a] 6 [b] The age [c] 12 [d] 120

**3** [a] The capacity of vessel

= 30 × 30 × 30 = 27 000 $cm^3$

= 27 litres.

[b] Length in drawing : Length in reality

1 : 9 000 000

? : 180 km.

The distance on the map

$= \frac{1 \times 180 \times 100\,000}{9\,000\,000} = 2$ cm.

---

**4** [a] Buying price : Profit : Selling price

100 % : 6 % : 106 %

? : : 3 180

The buying price $= \frac{100 \times 3\,180}{106}$ = L.E. 3 000

[b] Boys : Girls : Sum

4 : 5 : 9

? : ? : 540

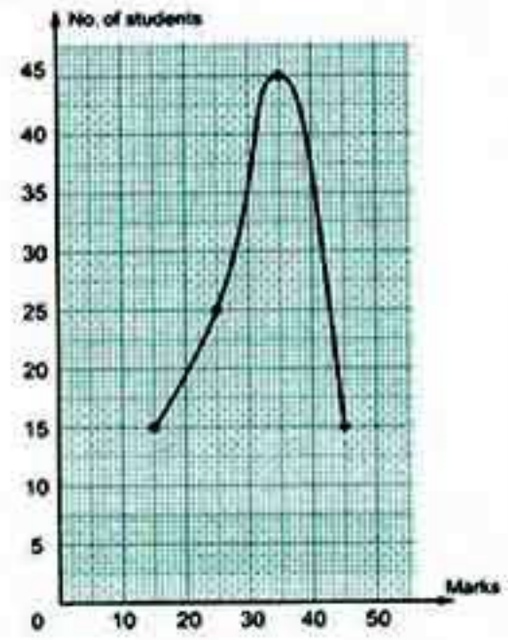
The number of boys $= \frac{4 \times 540}{9} = 240$ boys

The number of girls $= \frac{5 \times 540}{9} = 300$ girls

---

**5** [a] The volume of a cuboid = 16 × 9 = 144 $cm^3$.

[b]




## 24 Red Sea (2017)

**1** [a] 4.2 [b] 6 [c] 125 [d] The age

---

**2** [a] rhombus , square [b] 20

[c] 500 [d] 6

**3** [a] 1st lorry : 2nd lorry

600 kg. : 1.5 ton

"1.5 ton = 1.5 × 1 000 = 1 500 kg."

600 kg. : 1 500 kg.

600 : 1 500 (÷ 100)

6 : 15 (÷ 3)

2 : 5

[b] Length in drawing : Length in reality

1 : 1 100 000

15 : ?

The real length $= \frac{15 \times 1\,100\,000}{1}$

= 16 500 000 cm.

= 165 km.

---

**4** [a] Buying price : Profit : Selling price

100 % : 10 % : 110 %

? : : 2 200

The buying price $= \frac{100 \times 2\,200}{110}$

= L.E. 2 000

[b] The height $= \frac{4\,800}{240} = 20$ cm.

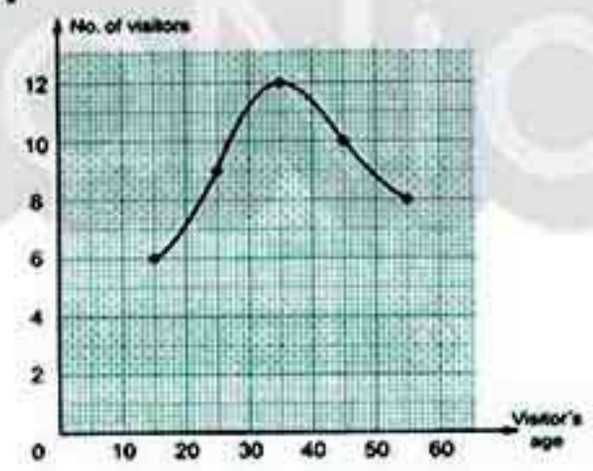
---

**5** [a] (1) m (∠ D) = 120°

(2) m (∠ BAC) = 35°

(3) AD = 6 cm.

[b]








## 25 Matrouh (2017)

**1** [a] edge length × edeg length × edge length

[b] 175 [c] 1 [d] the range

---

**2** [a] 6 [b] ∈ [c] 180° [d] the age

---

**3** [a] 1st road : 2nd road : Difference

2 : 5 : 3

? : ? : 21

The length of 1st road $= \frac{2 \times 21}{3} = 14$ km.

The length of 2nd road $= \frac{5 \times 21}{3} = 35$ km.

[b] Buying price : Profit : Selling price

100 % : 15 % : 115 %

? : ? : 41 400

The buying price $= \frac{100 \times 41\,400}{115}$

= L.E. 36 000

The profit $= \frac{15 \times 41\,400}{115}$ = L.E. 5 400

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**4** [a] The number of bottles $= \frac{12 \times 1\,000}{400}$

= 30 bottles

[b] (1) m (∠ ABD) = 82°

(2) m (∠ D) = 127°

(3) AC = 12 cm.

**5** [a] Length in drawing : Length in reality

1 : 500

2 : ?

The first dimension in reality

$= \frac{2 \times 500}{1} = 1\,000$ cm. = 10 m.

Length in drawing : Length in reality

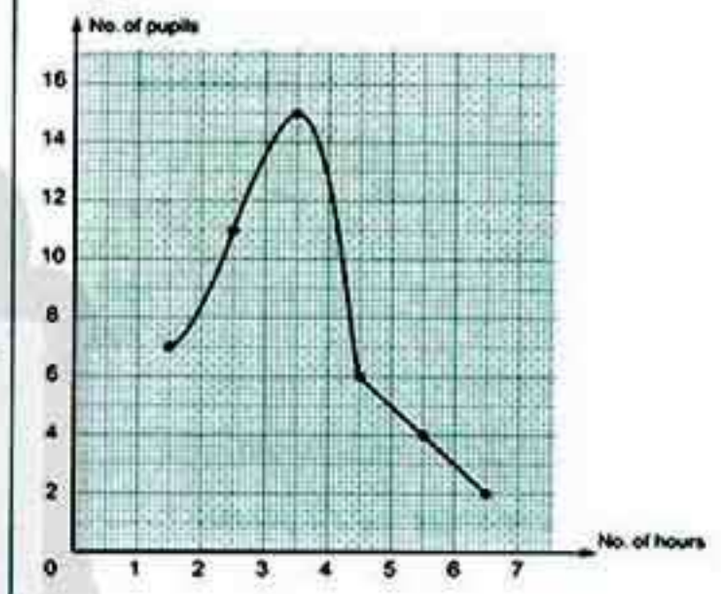
1 : 500

4 : ?

The second dimension in reality

$= \frac{4 \times 500}{1} = 2\,000$ cm. = 20 m.

[b]



## Answers of Governorates Examinations for the Year 2016

### 1 Cairo (2016)

**1** [a] 1 : 2 [b] 75 [c] 4 [d] 62°

**2** [a] 12 [b] nationality
[c] 2 [d] 90

**3** [a] Length in drawing : Length in reality
1 : 1 100 000
15 : ?
The real length = $\frac{15 \times 1\,100\,000}{1}$
= 16 500 000 cm.
= 165 km.

[b]

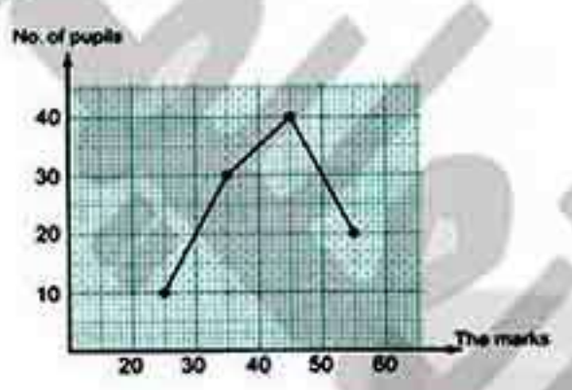
| 1st | : | 2nd | : | 3rd | : | Sum |
|---|---|---|---|---|---|---|
| 60 000 | : | 80 000 | : | 90 000 | : | (+ 10 000) |
| 6 | : | 8 | : | 9 | : | 23 |
| ? | : | ? | : | ? | : | 20 700 |

The share of the 1st person
= $\frac{6 \times 20\,700}{23}$ = L.E. 5 400
The share of the 2nd person
= $\frac{8 \times 20\,700}{23}$ = L.E. 7 200
The share of the 3rd person
= $\frac{9 \times 20\,700}{23}$ = L.E. 8 100

**4** [a] The profit = 130 000 – 100 000 = L.E. 30 000
The percentage of profit
= $\frac{30\,000}{100\,000} \times 100\,\% = 30\,\%$
[b] (1) 120°
(2) The perimeter of Δ XLZ
= 3 + 5 + 7 = 15 cm.

**5** [a] The number of bottles = $\frac{12 \times 1\,000}{400}$
= 30 bottles.

[b]




### 2 Giza (2016)

**1** [a] 18 [b] 27 [c] 1 : 4 [d] 6

**2** [a] 750 [b] 8
[c] age [d] rectangle

**3** [a] The volume = 12 × 10 × 8 = 960 cm³
[b] Buying price : Profit : Selling price
100 % : 15 % : 115 %
? : ? : 21 520
The buying price = $\frac{100 \times 21\,520}{115}$
= L.E. 18 713 $\frac{1}{23}$
The profit = $\frac{15 \times 21\,520}{115}$ = L.E. 2 806 $\frac{22}{23}$

**4** [a] The drawing scale = $\frac{10 \times 10}{2}$ = 50 : 1
[b]

| 1st | : | 2nd | : | 3rd | : | Sum |
|---|---|---|---|---|---|---|
| 2 | : | 3 | : | | : | |
| | : | 4 | : | 5 | : | |
| 8 | : | 12 | : | 15 | : | 35 |
| ? | : | ? | : | ? | : | 280 |

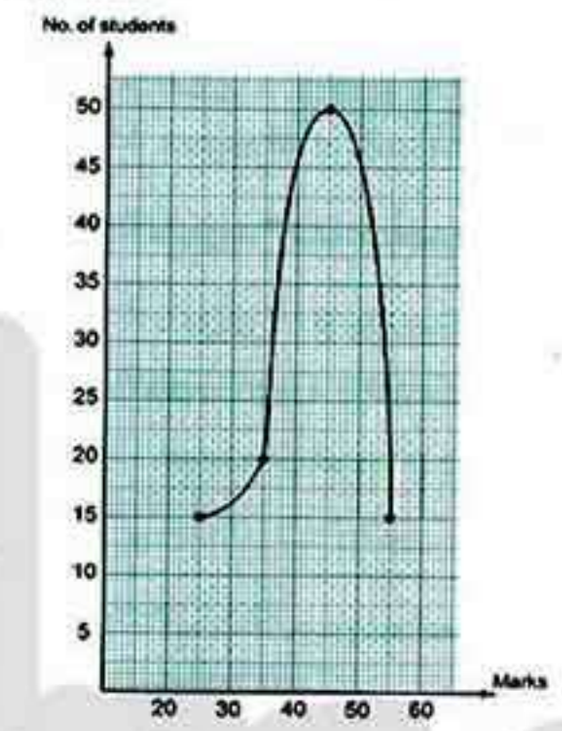
The share of the 1st merchant
= $\frac{8 \times 280}{35}$ = 64 kg.
The share of the 2nd merchant
= $\frac{12 \times 280}{35}$ = 96 kg.
The share of the 3rd merchant
= $\frac{15 \times 280}{35}$ = 120 kg.

**5** [a] (1) 60° (2) 120°
(3) The perimeter of the parallelogram ABCD = 5 + 7 + 5 + 7 = 24 cm.





[b]




### 3 Alexandria (2016)

**1** [a] 220 , 12 [b] 50
[c] 4 630 [d] number of sets

**2** [a] 5 [b] the favourite colour
[c] 2 : 5 [d] 5

**3** [a]

| Length | : | Width | : | Perimeter |
|---|---|---|---|---|
| 7 | : | 4 | : | 22 |
| ? | : | ? | : | 44 |

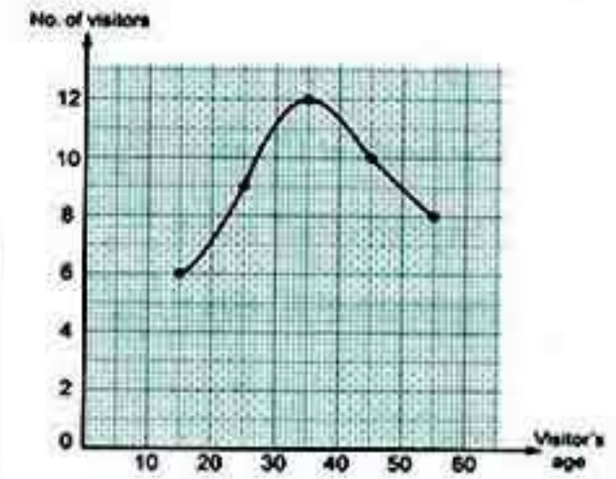
Length = $\frac{7 \times 44}{22}$ = 14 m.
Width = $\frac{4 \times 44}{22}$ = 8 m.
The area of rectangle = 14 × 8 = 112 m²
[b] The volume = $\frac{1}{3} \times 7 \times 5 \times 9$ = 105 m³

**4** [a] The rate of 1st machine = $\frac{500}{2}$ = 250 m./hr.
The rate of 2nd machine = $\frac{600}{2.5}$ = 240 m./hr.
The first machine is more efficient than the second machine.

[b] Buying price : Profit : Selling price
100 % : 14 % : 114 %
? : : 1 026
The buying price = $\frac{100 \times 1\,026}{114}$
= 900 pounds.

**5** [a] The volume of the big cube = 8 × 8 × 8
= 512 cm³
The volume of a small cube = 2 × 2 × 2
= 8 cm³
The number of small cubes = $\frac{512}{8}$
= 64 cubes.

[b] (1) 27 visitors.
(2)




### 4 El-Kalyoubia (2016)

**1** [a] 1 : 2 [b] 40
[c] 5 [d] $\frac{\text{length in drawing}}{\text{length in reality}}$

**2** [a] 30° [b] 750 cm³
[c] 12 [d] age

**3** [a] The rate = $\frac{240}{3}$ = 80 km./hr.
[b] Before interest : Interest : After interest
100 % : 8 % : 108 %
20 000 : : ?
The total amount = $\frac{108 \times 20\,000}{100}$
= L.E. 21 600

**4** [a] Length in drawing : Length reality

200 : 1

? : 1.2

The length in the picture = $\frac{200 \times 1.2}{1}$

= 240 mm.

= 24 cm.

[b] The volume of the box

= 30 × 25 × 15 = 11 250 $cm^3$.

The volume of a piece of sweet

= 6 × 5 × 3 = 90 $cm^3$.

The number of pieces of sweets

= $\frac{11\,250}{90}$ = 125 pieces.

**5** [a] 1st side : 2nd side : 3rd side : Sum

2 : 3 : 4 : 9

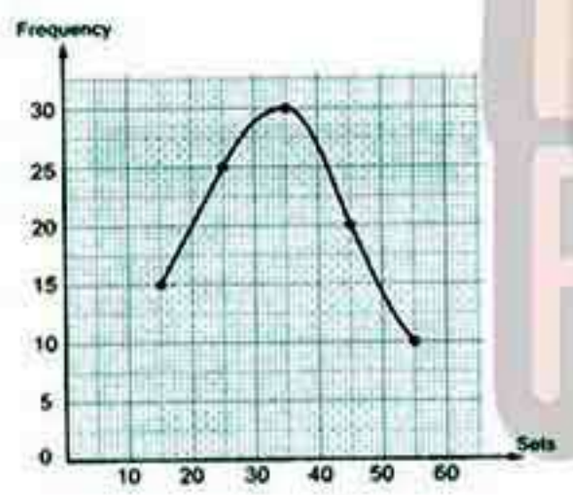
? : ? : ? : 108

The length of 1st side = $\frac{2 \times 108}{9}$ = 24 cm.

The length of 2nd side = $\frac{3 \times 108}{9}$ = 36 cm.

The length of 3rd side = $\frac{4 \times 108}{9}$ = 48 cm.

[b]




## 5 El-Sharkia (2016)

**1** [a] $\frac{2}{5}$ [b] 2 000

[c] 9 [d] the weight

**2** [a] 4 : 3 [b] 0.27 [c] 180° [d] 40

**3** [a] 1st angle : 2nd angle : 3rd angle : Sum

1 : 2 : 3 : 6

? : ? : ? : 180

The measure of 1st angle = $\frac{1 \times 180}{6}$ = 30°

The measure of 2nd angle = $\frac{2 \times 180}{6}$ = 60°

The measure of 3rd angle = $\frac{3 \times 180}{6}$ = 90°

The triangle is a right-angled triangle.

[b] Length in drawing : Length in reality

1 : 1 100 000

15 : ?

The real length = $\frac{15 \times 1\,100\,000}{1}$

= 16 500 000 cm. = 165 km.

**4** [a] Buying price : Profit : Selling price

100 % : 12 % : 112 %

? : : 2 688

The buying price = $\frac{100 \times 2\,688}{112}$

= L.E. 2 400

[b] m (∠ B) = 110° , m (∠ DAC) = 30°

**5** [a] The volume = 6 × 6 × 15 = 540 $cm^3$.

[b]